



Post Incident Analysis (After-Action Review)

May 7, 2019

LETTER OF TRANSMITTAL

May 7, 2019

Mr. Jim Freeman, County Manager
Polk County Manager's Office
330 W Church St
Bartow, FL 33830

Direct: 863-534-6444

Re: Polk County Fire Rescue Post Incident Analysis

Dear Manager Freeman,

Emergency Services Consulting International, Inc. (ESCI) is pleased to provide this Post Incident Analysis report for the residential structure fire incident that occurred on November 23, 2018. This document was prepared in accordance with the information provided to and reviewed by the ESCI team with consideration to nationally recognized standards and industry best practices.

ESCI thanks the leadership, members, and staff of the County for their assistance in completing this report. Please contact me with any questions or requests for additional information.

Sincerely,



James Angle
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Emergency Services Consulting International wishes to extend its sincere appreciation to the various individuals and employees of the Polk County Fire Rescue Department and representatives from the Polk County Sheriff's Office Communication Center, for their time, effort, input, and assistance with completing this report. ESCI also wishes to acknowledge the following individuals and organizations:

Polk County

Jim Freeman
County Manager

Polk County Fire Rescue

Tony Stravino
Fire Chief

Robert Weech
Assistant Chief

Mike Linkins
Deputy Chief

Chris Jonckheer
Public Information Officer

Jay Schwartz
Captain

Polk County Sheriff's Office

Grady Judd
Sheriff

Kurt Lockwood
Deputy Director

...and all the firefighters, EMS personnel, law enforcement officers, and 911 dispatch personnel of Polk County, who daily serve the citizens and visitors of their community with honor and distinction.

EXECUTIVE SUMMARY

Emergency Services Consulting International (ESCI) was engaged by the Polk County Board of County Commissioners to conduct a Post Incident Analysis—After Action Review of a fatal, residential structural fire. Polk County Fire Rescue (PCFR) responded to the fire which occurred on Friday, November 23, 2018. The 911 caller stated that her home was on fire, and she was trapped. The caller stayed on the phone with the 911 operator but eventually succumbed to the fire after the arrival of the first due engine.

The incident received considerable, negative, press coverage. Department and County leadership subsequently requested an objective third-party review of the incident, including all actions taken by crews on scene and any factors that may have influenced their actions.

This review includes both an analysis of department actions specific to this incident as well as an analysis of the current conditions and performance of the department in order to provide context for the review and analysis of actions taken on November 23. In addition to performance, departmental Standard Operating Procedures/Guidelines and response protocols were reviewed. Further, a comparison with industry standards and best practices was made which led to key findings specific to this fire and to the department overall.

ESCI assembled a team of experienced fire service professionals to review department-provided data, audio tapes, press releases, and conduct face-to-face interviews with over 30 members of the fire department including staff officers and all the responders to the incident in question. One member of the team, a communication center subject matter expert, interviewed key staff at the Polk County Sheriff Office (PCSO) Emergency Communications Center (ECC).

ESCI thanks the Polk County Manager and Board of County Commissioners, Sheriff Grady Judd, County management, Fire Chief and staff of the Polk County Fire Rescue Department (PCFR), and the staff of the Polk County Sheriff's Office (PCSO) Emergency Communications Center (ECC) for their outstanding cooperation in the preparation of this report. All involved were transparent and candid in their comments and provided a tremendous amount of essential information. The ESCI team was provided access to any and all records and personnel requested from PCFR.

The ESCI team found all members of PCFR who were interviewed and with whom we interacted to be very dedicated to the County and their jobs at the fire rescue department. They were pleased to participate in this process in hopes that the department would be improved as a result. This dedication and commitment to service should make Polk County residents proud of their fire rescue department.

The ESCI team first evaluated current department conditions in order to develop a performance and expectation baseline that existed prior to and since the fire. This included an organizational overview of the departments, management components, staffing, service delivery and performance, and training programs as well as other areas. Following this evaluation, the team reviewed the specific incident itself which included a detailed review and analysis of the following:

- Incident Timeline/Transcript Review
- Structure Description
- Environmental Conditions
- Firefighter Health and Wellness
- Water Supply Resources Available and Used
- Strategies and Tactics
- Scene Safety Considerations
- Post-Incident Actions of Responders and Department

The final section of the report provides Lessons Learned, framed as key findings, and recommendations. The key findings and associated recommendations were prioritized and categorized to address Polk County Fire Rescue as well as Polk County Sheriff's Office E-911 Communications. These key findings and recommendations represent the most significant factors in the collective observation, analysis and opinion of the Review Team members and are intended to focus attention on the points that should have the greatest impact on guiding Polk County Fire Rescue toward improvement and success.

Significant documents related to this study and ultimately the key findings and recommendations are included in the appendix.

Current Department Conditions

Polk County, Florida, with a total area of 2,011 square miles is the fourth largest county in the state. It is located approximately mid-way between the Orlando and Tampa metro areas which are joined by Interstate 4 running east-west through the northern third of the County. According to the U.S. Census Bureau, 21 percent of the current 686,483 population is 65 years of age or older and 5 percent is under five years of age. This means that 26 percent of the County's population lies within age groups at highest risk in residential fire incidents and who account for some of the highest use of emergency medical services. Senior citizens can have difficulty escaping from fire due to physical limitations. Seniors also tend to use emergency medical services more frequently than younger persons. As the population ages, this will create an increase in service demand for emergency medical services which are already struggling to meet current demand.

Polk is one of 20 charter counties in Florida which operate under their own charter, which means that they have more locally granted powers than constitutional counties. Under the Polk County Charter, the Board of County Commissioners (BoCC) is the governing body of Polk County. Polk County Fire Rescue is a department of the BoCC and reports to the County Manager through an Assistant County Manager for Public Safety.

PCFR provides Countywide ambulance transport service at the Advanced Life Support (ALS) level and fire rescue service to the unincorporated parts of the County as well as several of its municipalities from 44 fixed station locations throughout the County, of which 10 are EMS-only stations. Thirty-four (34) fire stations are staffed on a full-time basis 24 hours per day, 7 days per week, with 561 uniformed, career personnel. All members are trained and certified by the State of Florida as firefighters and either Emergency Medical Technicians (EMTs) or Paramedics (dual certified). The 10 EMS-only stations are staffed by single certified EMTs and paramedics (not fire certified). Fifteen of PCFR's 31 engine companies are staffed at the ALS level and the remaining 16 engines are Basic Life Support (BLS). Additionally, PCFR deploys 20 ALS medic units and 18 ALS Fire Rescue units (ambulances) for a total of 38 ALS ambulances per day. Operational staff are supported by 32 uniformed and 24 non-uniformed, civilian administrative staff.

The Fire Rescue Services Director (Fire Chief) identified the top four critical issues facing the department from his perspective. These included: (1) personnel and staffing; specifically, shortages and experience; (2) equipment – resources – apparatus – station needs; (3) training; lack of training facilities and operationally experienced personnel; and (4) overtime frequency—voluntary and mandatory.

Polk County Fire Rescue Mission Statement

**THE MISSION OF POLK COUNTY FIRE
RESCUE IS TO WORK IN
PARTNERSHIP WITH OUR
COMMUNITY TO PROTECT LIVES AND**

Emergency calls for fire rescue and EMS emergencies are handled in the Countywide Emergency Communications Center (ECC) run by the Polk County Sheriff's Office. There are 156 members assigned to the ECC, of which there are approximately 39 members assigned per shift, including supervisors, Training Officers, Quality Assurance Officers, and part-time members. In 2017, the ECC received 797,480 emergency and non-emergency calls; of those, 96,987 calls were fire and medical calls for service.

In 2017, PCSO answered 99.4 percent of all 911 calls within 10 seconds, as well as 98.7 percent of administrative, non-emergency calls. The Polk County Consolidated Communications Center is operated by the Polk County Sheriff's Office and is located on the PCSO main campus.

The 561 uniformed operational positions of various ranks, certifications, and assignments on three separate shifts are typically broken into companies of two or three for a fire engine or aerial apparatus, with a Company Officer, Driver/Operator, and Firefighter/EMT/Paramedic. Single-certified EMS personnel are typically assigned to companies of two personnel with at least a Paramedic assigned who serves as the lead member on the unit. Additionally, PCFR has brush trucks, tenders, and other support units within their stations that are cross-staffed.

The Emergency Fire Dispatch (EFD) protocol shows PCFR resource deployment in the following matrix by the NFPA recommended staffing for an initial full alarm assignment to residential structure fire. For residential structure fire responses (coded as a 69E06), PCFR dispatches 18 personnel (on 7 units), whereas the NFPA 1710 requirement is 15 personnel. This assumes each unit is dispatched and that each has the minimum staff described.

Polk County Fire Rescue Vision Statement

**A UNITED AND PROFESSIONAL TEAM
COMMITTED TO EXCELLENCE AND
INNOVATION IN PUBLIC SERVICE.**

PCFR Deployment for Structure Fires

Call Type	Description	Amb.	Eng.	B/C	H/R	Sq.	Lad	Staff ¹
69	Structure Fire	1	3	2	—	—	—	13
69E02	High Rise	1	3	2	1	1	1	22
69E02T	Trapped High Rise	1	4	2	1	1	1	25
69E03	Commercial/Industrial	1	3	1	1	1	1	21
69E03T	Trapped Commercial/Industrial	1	4	2	1	1	1	25
69E05	Residential (Multiple)	1	3	1	1	1	1	21
69E05T	Trapped Residential (Multiple)	1	4	1	1	1	1	24
69E06	Residential (Single)	1	3	1	1	1	—	18
69E06T	Trapped Residential (Single)	1	4	1	1	1	—	21

¹Staff is based on the following: Amb. = 2, Eng. = 3, B/C = 1, H/R = 3, Sq. = 3, Lad = 3

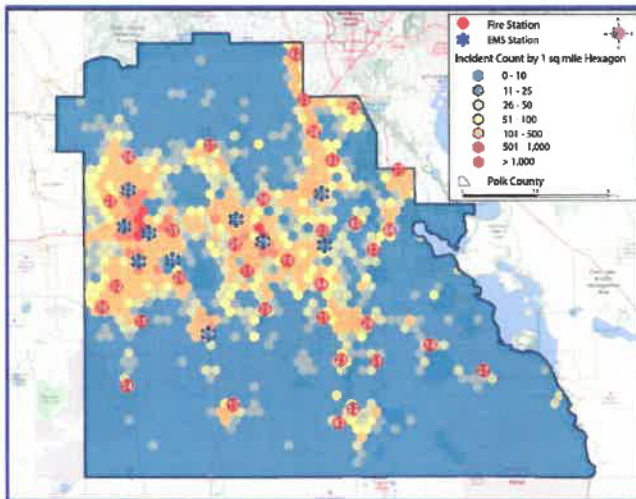
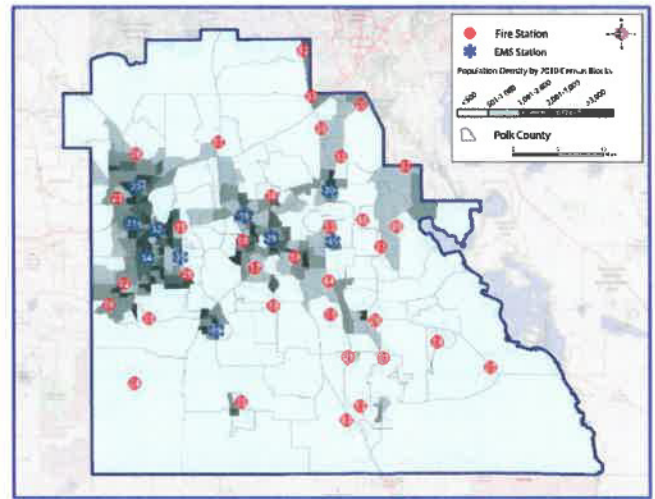
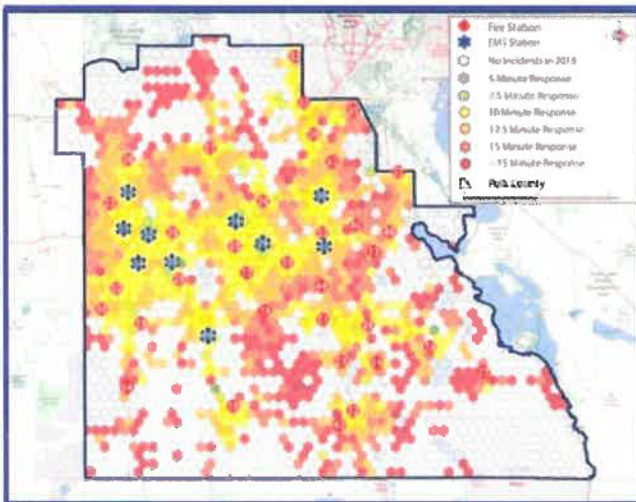
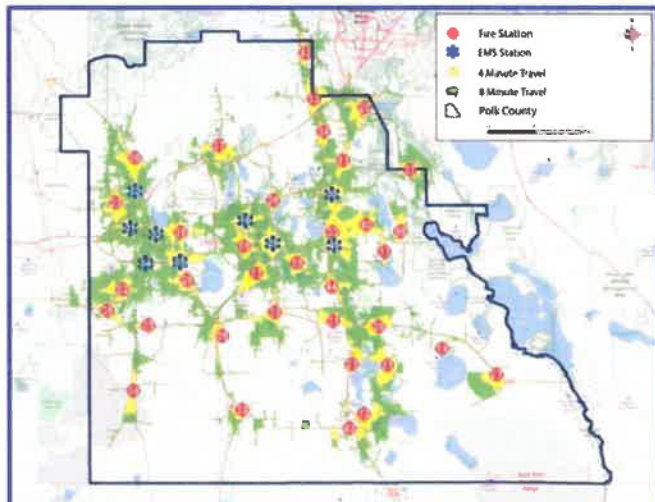
Initial Full Alarm Assignment for Residential Structure Fire

Initial Full Alarm Assignment 2,000 SF Residential Structure Fire	
Incident Commander	1
Water Supply Operator	1
2 Application Hose Lines	4
1 Support Member per Line	2
Victim Search and Rescue Team	2
Ground Ladder Deployment	2
Aerial Device Operator	1
Incident Rapid Intervention Crew (2 FF)	2
Total	15

ESCI evaluated a total of 634,144 records for the period 2015 through 2018, from 362,205 single incidents to understand service demand and operational performance. Eighty-six percent of the incidents were EMS related while two percent were fires and twelve percent others (overpressure/rupture, hazardous conditions, services calls, good intent, false alarms, weather, and special incidents).

Temporal variation in demand was also analyzed, and it was determined that the distribution of incidents across each month was consistent. The distribution across each day of week was also consistent. The variation for incidents by time of day was as expected with the busy periods during the daytime hours and less busy in the nighttime hours.

As expected and consistent with other communities, the demand analysis revealed that areas of higher call volume were areas of higher population density. As such, the deployment in these higher density areas is better. This is illustrated in the following figures.

PCFR Geographic Service Demand, 2018**Polk County Population Density****Actual PCFR Rescue Time from all Stations, 2018****Predicted PCFR Travel Time from Fire Station Locations**

As part of the performance analysis two standards of coverage were considered; the NFPA requirement as found in NFPA 1710 and the Polk County adopted standards. Each are summarized in the following figure.

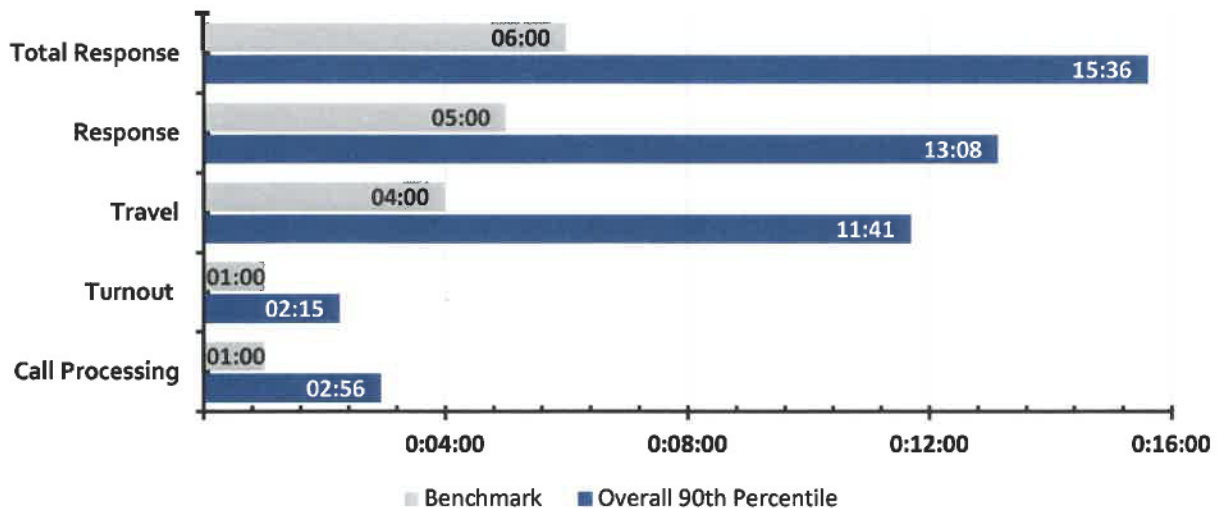
NFPA 1710 Standards for Fire/EMS Responses

Response Interval	NFPA Standard	PCFR Adopted Standard ¹
Call Processing	60 seconds or less at 90% for High Acuity Calls	None
Turnout Time	60 seconds or less at 90% for EMS 80 Seconds or less at 90% for Fire and Special Ops	60 seconds, 07:00–22:00 90 seconds, 22:00–07:00
Travel Time	240 seconds (4 minutes)	480 seconds (8 minutes), urban/suburban 780 seconds (13 minutes), rural

¹ Urban/suburban and rural have not been defined as they relate to these standards.

The overall performance at the 90th percentiles for the various response time components is summarized below. Also as expected for a large county with considerable rural area and heavy call volume, department 90th percentile response is significantly in excess of the NFPA 1710 standard.

NFPA 1710 Standards Compared to PCFR Performance from PCFR RMS Data, 2015–2018



Not included in the previous chart is the measurement of the pre-alert page that is sent to identified PCFR pagers at the time of call creation. This performance—at the 90th percentile—was 01:58 and 01:21 for 2017 and 2018 respectively as documented in the ECC CAD data.

Providing safe and effective fire and emergency services requires a well-trained workforce. Training and education of personnel are critical functions for Polk County Fire Rescue. Without quality, comprehensive training programs, emergency outcomes are compromised, and emergency personnel are at risk.

For training to be fully effective, it should be based on established standards. There are a variety of sources for training standards; the National Fire Protection Association (NFPA), International Fire Service Training Association (IFSTA), Florida State Fire Marshal Bureau of Fire Standards and Training, and PCFR developed and established job performance check offs as the basis for its fire suppression training practices. State Department of Health, Bureau of EMS and national Emergency Medical Services standards, and local Medical Director protocols are used as the baseline for medical training coursework.

PCFR provided a total of 109,760 total training hours in 2018. This included 18,648 hours of fire-related training and 91,111 hours of EMS training.

PCSO ECC uses internal and external training sources. Internal training is conducted using an in-house training staff. This training includes the State required Telecommunicator training necessary to sit for the State Telecommunicator exam. A State exam is administered by the State and requires a passing grade for a Dispatcher to receive their certification. Other classes provided by the in-house staff include but are not limited to the required County HR classes received by all employees and any updates as they occur. External training includes classes in Emergency Medical Dispatch (EMD) and Emergency Fire Dispatch (EFD) by Priority Dispatch Instructors.

Incident Analysis

The incident analysis itself contains two major parts; a detailed objective review of all issues surrounding the incident from environmental factors to agency tactics and, a comparison of department actions against industry standards and best practices followed by findings and lessons learned. This includes an examination of how the responders and the department handled the incident from the first E-911 call through post-incident actions. The PCSO Communications Center was notified of a house fire at [REDACTED] via a 911 call at 19:06:49 (7:06 pm) on November 23, 2018. The caller was the sole occupant of the house and reported that her house was on fire and she was home alone and on a walker. At 19:07:31—according to the transcript, a pre-alert page was sent to selected PCFR pagers followed by audible tones alerting the full first alarm assignment beginning at 19:08:28 and completed at 19:08:41.

Each responding unit assigned to the incident is identified in the following figure as are their respective times. The initial alarm assignment—as dispatched—is highlighted in yellow. The full transcript is provided in Appendix A.

PCFR Response to [REDACTED] November 23, 2018¹

Unit	Pre-Alert Page ²	Dispatched	Enroute	Arrival	Response Time	Clear Time	Time On-Incident
EN006 ³	19:07:31	19:08:41	19:10:05	19:22:47	0:14:06	5:14:47	10:06:06
BC003 ³	—	19:08:41	19:10:13	19:29:50	0:21:09	4:46:15	9:37:34
MR006 ³	—	19:08:41	19:08:51	19:27:38	0:18:57	4:26:41	9:18:00
BC001 ³	—	19:08:41	19:10:58	19:29:21	0:20:40	4:47:23	9:38:42
SQ007 ³	—	19:08:41	19:08:59	19:30:12	0:21:31	4:24:40	9:15:59
EN039 ³	—	19:08:41	19:09:11	19:35:40	0:26:59	4:40:51	9:32:10
EN023 ⁴	—	19:15:58	19:16:01	19:26:30	0:10:32	4:45:19	9:29:21
TE039	—	19:13:14	19:13:14	19:37:21	0:24:07	4:40:46	9:27:32
TE004	—	19:53:02	19:54:03	20:45:01	0:51:59	7:48:11	11:55:09
BR023 ⁵	—	19:55:15	19:55:18	19:55:21	0:00:06	5:17:23	9:22:08
AT019	—	19:38:31	19:45:33	20:48:00	1:09:29	4:29:09	8:50:38
MD231	—	19:36:54	19:36:54	19:55:55	0:19:01	4:15:47	8:38:53
FC506	—	21:18:24	21:18:24	22:17:03	0:58:39	23:50:43	2:32:19
TE015	—	19:53:02	19:53:33	20:30:39	0:37:37	22:59:59	3:06:57
TE006 ⁶	—	19:24:27	—	—	—	19:34:03	0:09:36

¹ Source: PCFR provided RMS records.

² Initial Pre-Alert page is sent to FD pagers at the time the incident is entered into the CAD per PSCO ECC procedures. In this case the incident was created at 19:06:54 and initial pre-alert page was sent at 19:07:31 to STA120P (E006).

³ Initial Assignment

⁴ Initially on a different incident and was staged—added themselves to the fire with approval of BC001.

⁵ BR023 was added to the CAD records when the unit was already on scene.

⁶ Tender 6 (TE006) did not respond to the incident although was listed in the RMS report.

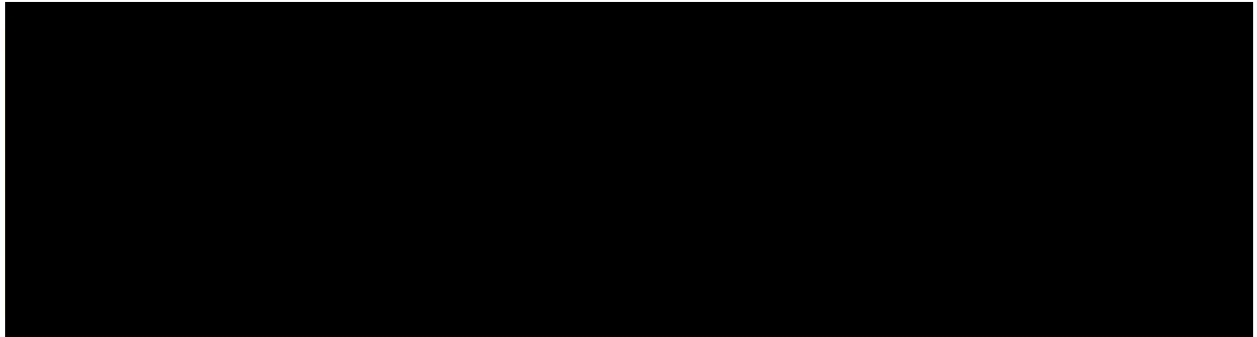
A descriptive summary of the structure—based on the information available in provided in the next figure.

Structure Description Summary¹

Category	Type
Year Built	1980
Style	Single Family
Substructure	Continuous Wall
Frame/Construction Type	Wood Frame
Exterior Wall	Wood
Roof Structure	Gable-Metal
Floor-Cover	Carpet-Vinyl
Interior Walls	Plywood Panel
Shape	Rectangle
Drive/Walk Way	Dirt
Fencing	None
Bedrooms	3
Baths	2
Fireplace	Yes
Gross Area	2,479 FT ²
Living Area	1,517 FT ²

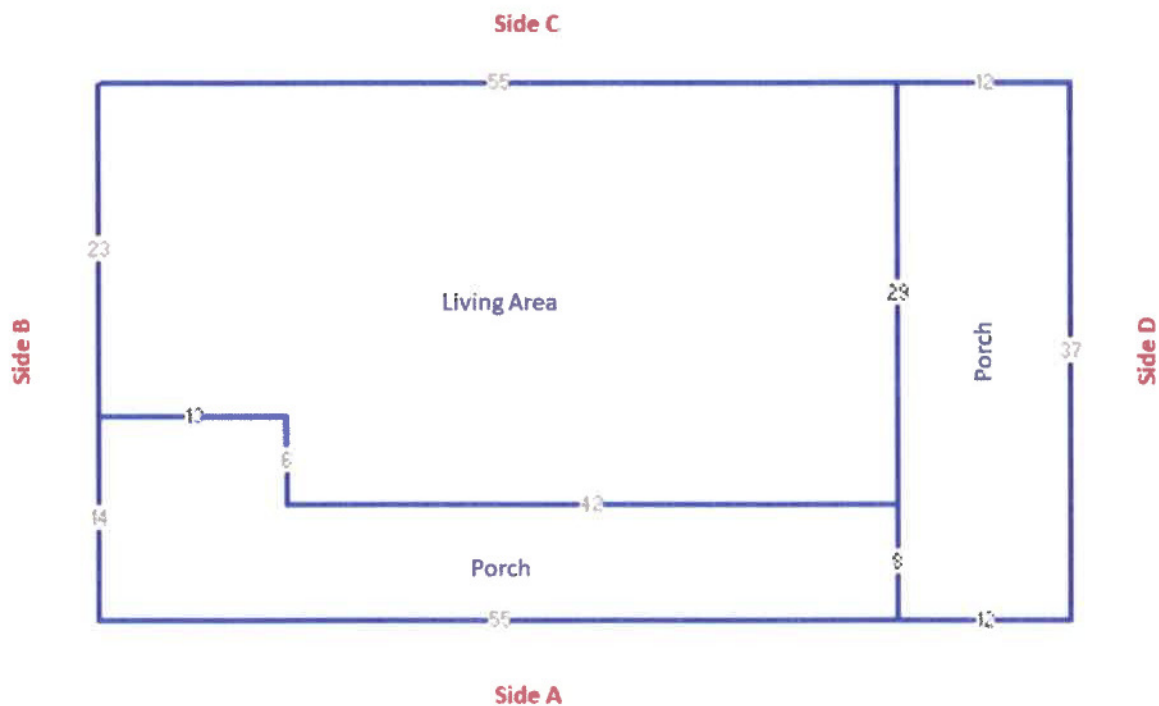
¹ Source: Polk County Property Appraiser Records

The next figure illustrates the location of the structure relative to Rockridge Road (paved), the dirt road off of Rockridge Road, the dirt driveway to [REDACTED], and the surrounding area. The second figure is close up of the area with the structure identified by the red roof.



The next figure was also adapted from the Polk County Property Appraiser Records. It provides a layout of the structure including the living area and the porches.

House Layout Showing Sides¹



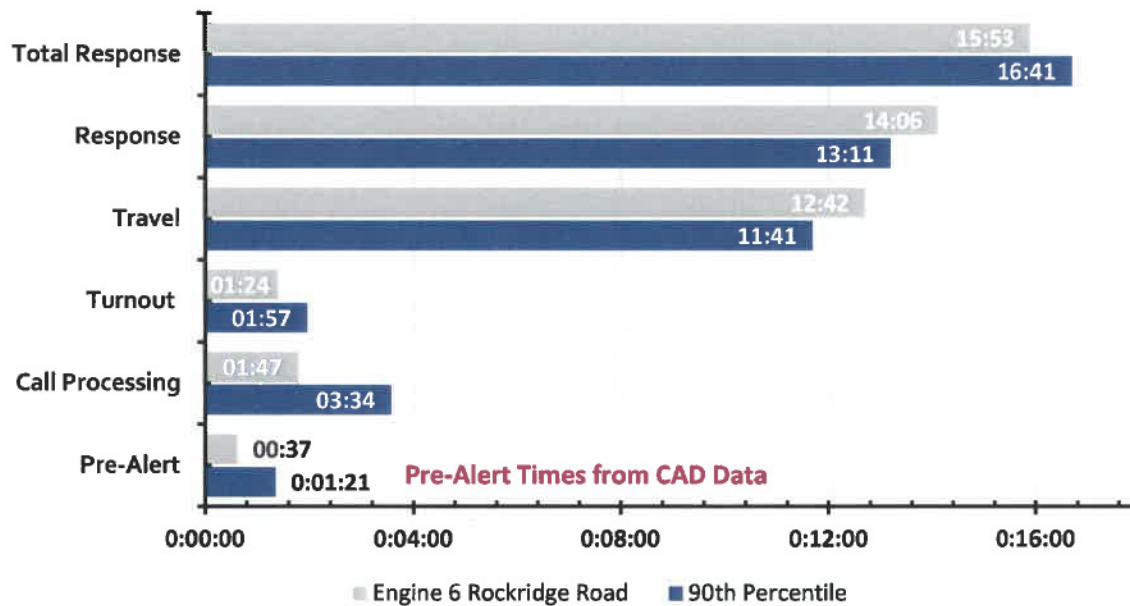
¹ Source: Polk County Property Appraiser Records

Additional information discovered and analyzed during the incident analysis is summarized below and presented in full later in this report. It is this information that led to the key findings and recommendations.

- The structure lies in a heavily wooded area surrounded by mature trees ranging from 20-to-50 feet in height.
- There were not any exposed structures to the fire building.
- The home was a wood frame house (log cabin) with a tin roof.
- The Florida Forestry Service report indicates that fire danger from wildland fire was low on the incident date and time based on weather factors and a moderate drought index of 420 (out of 800) on the Keetch-Byram Drought Index (KBDI).
- The incident occurred after sunset and all units, except for Tender 4, were available prior to sunrise on the 24th.
- The temperature—between 63 and 70 degrees—should not have been a factor and would be considered mild in relation to temperatures faced by firefighters at other times of the year. The humidity was reported to be above 80 percent throughout the incident indicating a need for Commanding Officers to be alert to crews for signs of heat illness. Winds at 2 MPH would likely not have been a factor in fire spread.
- There is no marked address on the home or on the main road (Rockridge Road). The home was not visible from Rockridge Road.
- The house was located at the end of a narrow unpaved driveway approximately 300 feet from a wider dirt road that is approximately 1,000 feet from the main, paved road.
- Access to the structure was challenging because of overgrown trees, a ranch-style, post-framed entrance archway, and an uneven and unpaved roadway of loose dirt.
- Due to the secluded location of the address and its rural setting, there are no fire hydrants in direct proximity to the home.
- PCFR units that were first to arrive at [REDACTED] indicated a large amount of flame and smoke coming from the home with fire extension to the trees and understory on the Bravo side of the home.
- Captain Williams on first due Engine 6 the evening of November 23, 2018, chose to forgo bringing Water Tender 6, stating that he wanted to keep the integrity of his crew together should they need to make a rescue of an occupant.
- Engine 6 (E6), the first due and first arriving engine, reported on-scene (actually located at the driveway entrance 300' from the structure) at 19:22:47 with a response time of 0:14:06; 15 minutes, 58 seconds after the Call-Taker first answered the 911 call at the communications center.
- As units reported responding to the Dispatcher—between 19:09:27 and 19:12:54—the Dispatcher announced five times over the radio that someone was trapped in the structure.
- It may not have been apparent to all responding crews that the caller reporting the entrapment and the victim were one in the same.

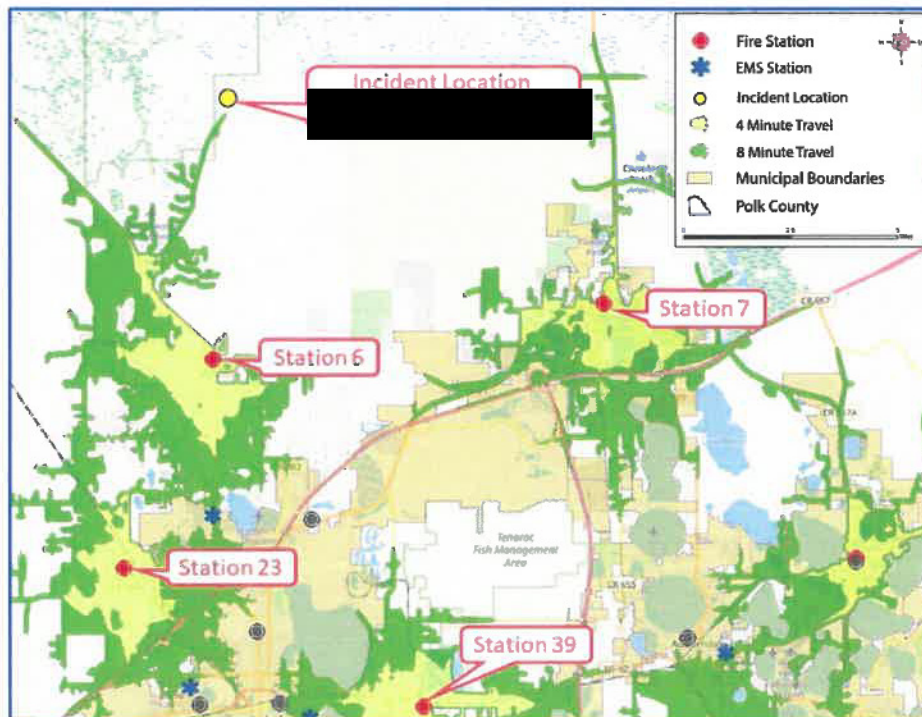
- The Dispatcher again advised that someone was trapped at 19:25:30 which was acknowledged by E6. It was not until after Engine 6's arrival and upon questioning by Battalion Chief 1 (BC1) that dispatch reported that, "Command, we are still landline there is somebody inside the structure," and noted the location as the kitchen. This was at 19:30:29, approximately 03:19 after the last contact with the victim on the phone.
- The initial strategy and tactics employed by the first arriving crew and that of the subsequent crews that arrived were defensive in nature.
- Two injuries to responding PCFR personnel were reported and documented as having occurred on the scene of the Rockridge Road fire.
- The power service [REDACTED] was fed from a feeder line that ran above ground the length of the 300' driveway with a service line to the Alpha-Delta corner to the meter box.
- The responding crews remained on scene of this address for a protracted length of time and were eventually relieved and replaced with fresh crews around daybreak. This is too long for the same first in units to operate.
- Responding PCFR personnel received no follow-up or debriefing of themselves or their crews post-fire.
- An effort to look at this incident more closely and determine the facts surrounding the challenges and obstacles faced did not occur until the County Manager was contacted by the Polk County Sheriff who expressed his concern about the incident on November 26, 2018.
- At the request of the Polk County Florida Sheriff's Office Telecommunications Division, representatives of the International Academies of Emergency Dispatch (IAED) Fire Standards Council reviewed records of the 911 call processing detail of the fire. Further the PCSO Bureau of Support Services, Telecommunications Section reviewed and wrote a response to the review of International Academies of Emergency Dispatch (IAED) Fire Council of Standards and Fire/Rescue Special Operations Group Executive Summary.
- When an emergency occurs, especially when there is a loss of life or an extreme impact to the community the need to communicate is immediate. An important component of a preparedness program or strategy is a crisis communications plan.
- ESCI interviews revealed that there was no contact with the family the night of the fire or in the days following the incident.
- Based on previous response performance in the County as analyzed earlier in this report and the predicted travel times to this location along with the accessibility issues encountered, the actual response times for responding units is consistent and within normal range for PCFR given its current resource level and distribution.
- A comparison was made between the performance of the first due engine—Engine 6—and the Polk County historical performance at the 90th percentile countywide as analyzed by ESCI.

Polk County Historical Performance in Relation to Engine 6 for 13802 Rockridge Road from PCFR RMS



- Engine 6 was sent the CAD pre-alert page at 19:07:31, or 37 seconds after the call was received.
- Overall response performance to the Rockridge Road fire was better than the 90th percentile PCFR total response performance for fires according to PCFR data. While the travel time, and therefore the response time, exceeded 90th percentile performance—call processing and turnout time were less.

Four- and Eight-Minute Predicted Travel Time in Relation to the Incident Location



- As the house was in a heavily wooded area, visualization of the extent and progression of the fire for the initial size up report was difficult. E6 initially reported heavy smoke as they reported on scene followed by a report of heavy flames and smoke at 19:23:16 once the officer walked the approximate 300' up the driveway to the front of the home. They reported 50 percent involvement two minutes later. Like all other fire officers—responding to low frequency, high risk events—Captain Williams had to rapidly perform a situational evaluation or size-up and determine the best strategy based on the information available and relying on his training and experience level. The blue card system—in use at PCFR—uses the Strategic Decision-Making Model illustrated next.

Strategic Decision-Making Model²



- The Blue Card system recognizes that an Incident Commander uses a combination of the following four basic information forms to help manage and process information on the emergency scene:
 - Previous experience
 - Visual information
 - Reported Info/Reconnaissance
 - Pre-incident planning and familiarity
- In this case, the initial arriving officer was relatively new in his position with limited experience, and likely had not been faced with an incident like this before. The visual information was limited upon initial arrival, however, once up the driveway, the Alpha side of the house would have been completely visible.

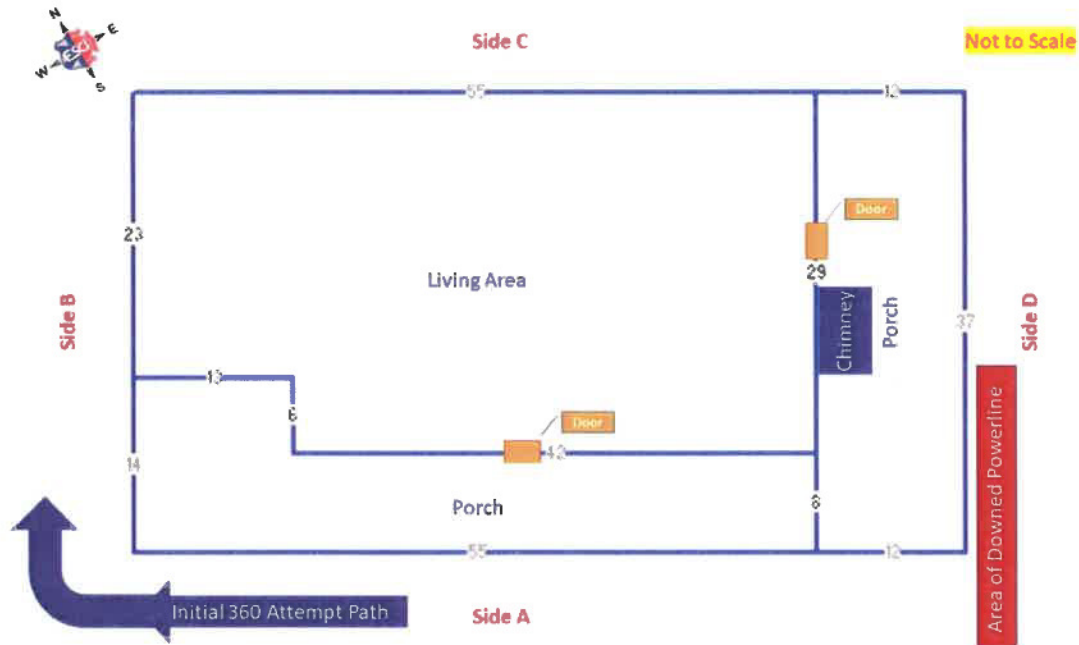
² Adapted from Blue Card SOP: <http://bshifterlibrary.blob.core.windows.net/pdfs/BlueCardSOP.pdf>

Incident Location in Relation to Engine 6's Location



- Captain Williams reported that he and his firefighter attempted to do a 360° survey.
- The officer's focus on the involved side of the home thwarted his attempt to make a 360° walk around the home to ascertain more about the progression of fire, survivable space entry, or egress points and other hazards as is standard protocol.
- Captain Williams considered making his way around the house moving to his right towards the Alpha/Delta side but was unable as a powerline had fallen by this time down on the Alpha/Delta side of the structure.

Floor Plan with Locations



- Captain Williams radioed at 19:25:36 he needed the crew of the next PCFR unit arriving on scene to come straight to the house to address “Two-in/Two-out” to possibly enter the structure.
- The lack of an initial 360° survey by Captain Williams made the reconnaissance ineffective.
- The information gathered by the Call-Taker was very good and the Call-Taker maintained communication with the caller from the time the call was initiated until contact was lost 20 minutes into the incident; five minutes after Engine 6 reported on scene at the end of the driveway.
- Based on the timeline, radio communication logs, and discussion with responders, there was no indication that the E6 crew was either focused on or in a mode to perform a search and rescue after the initial size-up as described.
- The body of fire, its rapid progression, and the powerline down contributed to Captain William’s tunnel vision, resulting in his focus on only one part of the situation rather than the whole losing situational awareness. Neither Captain Williams nor his firefighter brought forcible entry tools, a Thermal Imaging Camera (TIC), or a pressurized water extinguisher to the structure to assist them with an entry or search to execute a victim rescue.
- Captain Williams called for a courtyard lay and a defensive attack mode at 19:23:16—less than two minutes after stating they were on scene and just under four minutes from when contact with the victim was finally lost.
- It was reported that the victim was found near the door on the Delta side. This door would have been hidden behind the chimney from the initial arriving crew when standing in front of the Alpha-side of the home.

- If the 360° survey could have been completed going from Alpha to Bravo, Charlie, and then Delta or if initially on arrival Engine 6 went right first to Delta, Charlie, Bravo, Alpha for the 360° survey prior to the powerline failure, that door would have likely been seen and that would appear to be the only survivable space to possibly access during the five minutes from the units arrival at the driveway until contact was lost with the victim.
- After the initial actions and contact was lost with the caller, the incident was handled as a defensive fire in an area without hydrants and thick woods as exposures.
- The same crews that initially responded remained on the scene through the incident; a period of over nine hours for the initial units.
- After reviewing the incident from the Emergency Communication Center perspective, there were two key positions responsible for the handling of this incident; the Call-Taker and the Incident Dispatcher.
- The Call-Taker handled the 911 call from the caller who happened to be a first-party caller inside the home. The call lasted for 20 minutes, 31 seconds.
- The Call-Taker maintained contact with the caller providing pre-arrival and post-dispatch instructions, gathering information, and putting that information into the CAD system as notes pursuant to protocol.
- The Call-Taker, through her pre-arrival and post-dispatch instructions and questioning of the caller, elicited some very valuable information such as the location of the victim, the possible location of the fire on the roof, and the victim's condition. This information was typed into the CAD system and appeared under the info tab.
- The Call-Taker did advise the caller to exit the building if it was safe to do so, but there was never any sense of urgency or authority.
- The Dispatcher received the call from the Call-Taker via the CAD, sent the initial page and then communicated with the fire department units as they were enroute, responding, and on scene until the incident was closed at 12:52:14 the next day.
- The same information that was typed into the CAD system that was received by the 911 Call-Taker would have been visible not only to the fire department units responding with a working computer but also to the Dispatcher who was maintaining communication with the fire department units at dispatch, enroute, on scene, and until completion of the call.
- The Dispatcher did relay information after initial dispatch to the responding units that someone was trapped in the fire, although there appears to be a disconnect as it was not ever clear that the caller and the person trapped were one in the same.
- A great deal of valuable information put into the computer through the note system about the patient's condition and location in the house, doorways, and possible location of the fire was never verbally relayed over the radio to the responding units although not required by protocol.
- Although the information was put in the computer and would have come up on notes for firefighters responding if they were monitoring those notes, the first arriving unit (E6) did not have a working computer that day and had no access to that information.
- Once E6 and the other units were on scene, they would not have seen some of this valuable information unless it was relayed verbally over the radio from dispatch.

Lessons Learned/Recommendations

The following are the top five—in level of importance—key findings from the analysis. With each key finding there are one or more recommendations developed by the ESCI team. All key findings are in the lessons learned section of the report—there are 24 in total. The reader is encouraged to review all of these important findings.

The recommendations are divided into two sub-categories: fire rescue or fire rescue and PCSO ECC—depending on the subject of the recommendation.

Key Finding 1

Information provided by the caller(s) about an incident scene or patient status is vitally important to the units assigned to that incident. In this incident, the caller provided considerable information about the structure, her location within the structure, her condition, and access points to enter the structure. These information points were put into the CAD and showed up on the mobile computers. In this case, the first arriving unit had a computer that was out of service and none of this information would have been available to the crew of E6. Although not required by protocol, it was noted that many of these information points were never communicated verbally on the radio to the responding units or to the units that were on scene and away from their computers.

RECOMMENDATIONS:

- Empower the existing joint PCSO/PCFR steering committee to review and develop guidelines for the verbal communication of *vital incident information* to responding crews.
- Verbalize critical information provided by the caller through the CAD to the units in the field responding to incidents as agreed upon through the joint steering committee.
- Ensure a redundancy policy when critical information is provided by Dispatch.

AGENCY: FIRE RESCUE AND PCSO COMMUNICATIONS

Key Finding 2

During the interviews, some officers that responded to the incident reported seeing the notes in the CAD and wished that they had gotten on the radio to ensure that the other responding units understood what feedback was coming from the caller. None of the responders took that action to call other responding units.

RECOMMENDATION:

- All responders regardless of rank or position should be empowered to say something if they see or hear something critical to the incident. This communication ensures that each responder maximizes their situational awareness and that of units already on scene.

AGENCY: FIRE RESCUE

Key Finding 3

ESCI interviewed fire officers of various ranks and divisions within PCFR. It was apparent from these interviews that a majority of these officers are concerned with officer training, mentoring, and development of the existing officer cadre as well as the newly promoted and those aspiring for promotion to the rank. Coaching, mentoring, and performance matters are handled differently throughout the organization. Those that spoke to addressing poor or sub-par performance of subordinate and probationary personnel indicated that performance issues were generally handled verbally and when documented in a more formalized way it was disciplinary in nature. Illustration or follow-up to create a path to success for the sub-par performer was non-existent. Most interviewed related that addressing sub-par performance is perceived as conflict and is inconsistent, so it is avoided.

RECOMMENDATION:

- PCFR should develop and implement ongoing officer development and leadership training:
 - Utilize operational and tactical policies and procedures, using simulation where possible to enhance decision-making skills.
 - Coordinate training with human resource professionals to address performance evaluations to create a culture of success for the evaluator and those that receive them.
 - Facilitate programs for fire officers that address leadership, performance coaching, mentoring, and constructive confrontation of difficult conversations.
 - Utilize training academies such as State Fire College, National Fire Academy to develop Company and Chief Officers on leadership, strategies/tactics, communications, and interpersonal development.
- This ongoing program should be designed to have the participant meet the Fire Officer requirements found in NFPA 1021: *Standard for Fire Officer Professional Qualifications*.

AGENCY: FIRE RESCUE

Key Finding 4

Based on the timeline, radio communication logs, and discussion with responders, there was no indication that E6 was in a mode to perform a search and rescue after arrival and initial size-up. The officer and firefighter reported that they did not take any tools or other firefighting equipment with them to the scene. This may further imply the crew was not in a search and rescue mode.

The officer that was first to arrive at the Rockridge Road fire gave his crew of two personnel instructions to establish a water supply down the 300' driveway (Courtyard Lay) to address fire extinguishment and a way to be resupplied by incoming resources. However, the officer and crew confirmed that no resources or tools were deployed by the officer and firefighter to the burning structure to forcibly access or execute a rescue if needed. The mission of any fire department is protecting and saving lives. All firefighting and rescue tactics require mastery of basic skills. Therefore, it is about knowing the skills and realizing the importance of isolating the fire area and/or victims. Modern fire growth is measured in seconds, not minutes.

RECOMMENDATIONS:

- PCFR must emphasize through training and operational procedures what minimum equipment always comes off the apparatus with the crew based on the incident situation.
- Utilize current operational and tactical policies and procedures, using simulation where possible to enhance decision-making skills.
- Utilize current available training facilities to develop scenarios for crews to enhance skills and timing relating to vent, enter, isolate, search (VEIS) operations.

AGENCY: FIRE RESCUE**Key Finding 5**

The use of the Pre-Alert paging process adds value in reducing total response time if employed to its fullest potential.

Currently there is not consensus between the PCFR and PCSO ECC as to what stops the clock for dispatch call processing time. If call entry and the sending of the Pre-Alert Page to select units stops the clock, the call processing performance for this call was 37 seconds, well under the NFPA standards of 60 seconds.

If the call processing time performance is measured at the time when the full first alarm assignment has been verbally dispatched over the radio—as recorded in the RMS data provided by PCFR—the call processing time for this call was 1 minute 47 seconds. This would then exceed the 60 seconds called for in NFPA 1710 and NFPA 1221.

Additionally, as part of the performance evaluation, time stamps were not available that allowed for a measurement of alarm handling time in the PCFR RMS data. Specifically, from the time the 911 call is answered until the call is created. Although this was reported through the PCSO strategic plan provided.

RECOMMENDATION:

- The use of the Pre-Alert Page should be expanded to include the entire first alarm assignment beginning with the full first alarm assignment as opposed to notification—informational—pages for staff or other members.
- PCFR and PCSO form a joint work group of users and service providers to examine and agree on total response time definitions and what actions stop the clock at each measurement based on published standards.
- Where performance is found to be less than the standards or best practices examine underlying causes of this performance and seek out best practices that may be helpful in achieving improvements.
- PCFR to work with PCSO communications to develop and institute a process to incorporate all the applicable and available time stamps into the PCFR RMS.

AGENCY: FIRE RESCUE AND PCSO COMMUNICATIONS

Polk County Fire Rescue is a large and busy fire rescue system. It employs a dedicated group that provides emergency services to the residents and visitors to the County. ESCI's approach to this Post Incident Analysis of a fatal fire was to examine current conditions that exist within the department, including service demand and performance, to provide context and benchmarks against which incident performance were evaluated. In the end the current conditions helped the ESCI team analyze the fire and provide the County with 24 recommendations that can hopefully improve the readiness and operations of PCFR.

SECTION I: EVALUATION OF CURRENT DEPARTMENT CONDITIONS

INTRODUCTION TO CURRENT DEPARTMENT CONDITIONS

Emergency Services Consulting International (ESCI) was retained by the Polk County Board of County Commissioners to conduct a Post Incident Analysis (After Action Report) of a residential structure fire that occurred in Polk County on November 23, 2018 and resulted in a civilian fatality.

The first section of this study is a baseline assessment of the current conditions and current service performance of the Polk County Fire Rescue (PCFR) service delivery system. ESCI conducted an analysis of the department based on the key elements included in the following. The purpose of this evaluation is to assess the agency's operations in comparison to industry standards and best practices, as well as, to create a benchmark against which the actions taken during and after the incident in question can be measured.

ORGANIZATIONAL OVERVIEW

The *Organizational Overview* provides a summary of agency composition, configuration, and services provided. Data provided by the staff of Polk County Fire Rescue was evaluated. In addition, interviews with line personnel, bargaining unit representatives, supervisory and administrative staff, County administration, and Polk County Sheriff's Office (PCSO) Emergency Communications Center (ECC) were combined with information collected in the course of ESCI's fieldwork to develop the following overview.

The purpose of this section is two-fold. First, it verifies the accuracy of baseline information along with ESCI's understanding of the agency's composition. This provides the foundation upon which the Post Incident Analysis (PIA) is developed. Secondly, the overview serves as a reference for the reader who may not be fully familiar with details of the agency's current operations and level of service. Where appropriate, ESCI includes recommended modifications to current structure and practices based upon team observations made as measured against industry standards and best practices. These are found in the *Key Findings and Recommendations* section of this report.

Service Area Population and Demographics

Polk County, Florida totals 2,011 square miles, of which 1,798 square miles is landmass, making it the fourth largest county in the state. It lies approximately mid-way between the Orlando and Tampa metro areas which are joined by Interstate 4 running east-west through the northern third of the County. According to the U.S. Census Bureau, the population is currently 686,483. The City of Bartow is the County seat and the City of Lakeland is its largest city. Polk County comprises the Lakeland-Winter Haven Metropolitan Statistical Area (MSA).

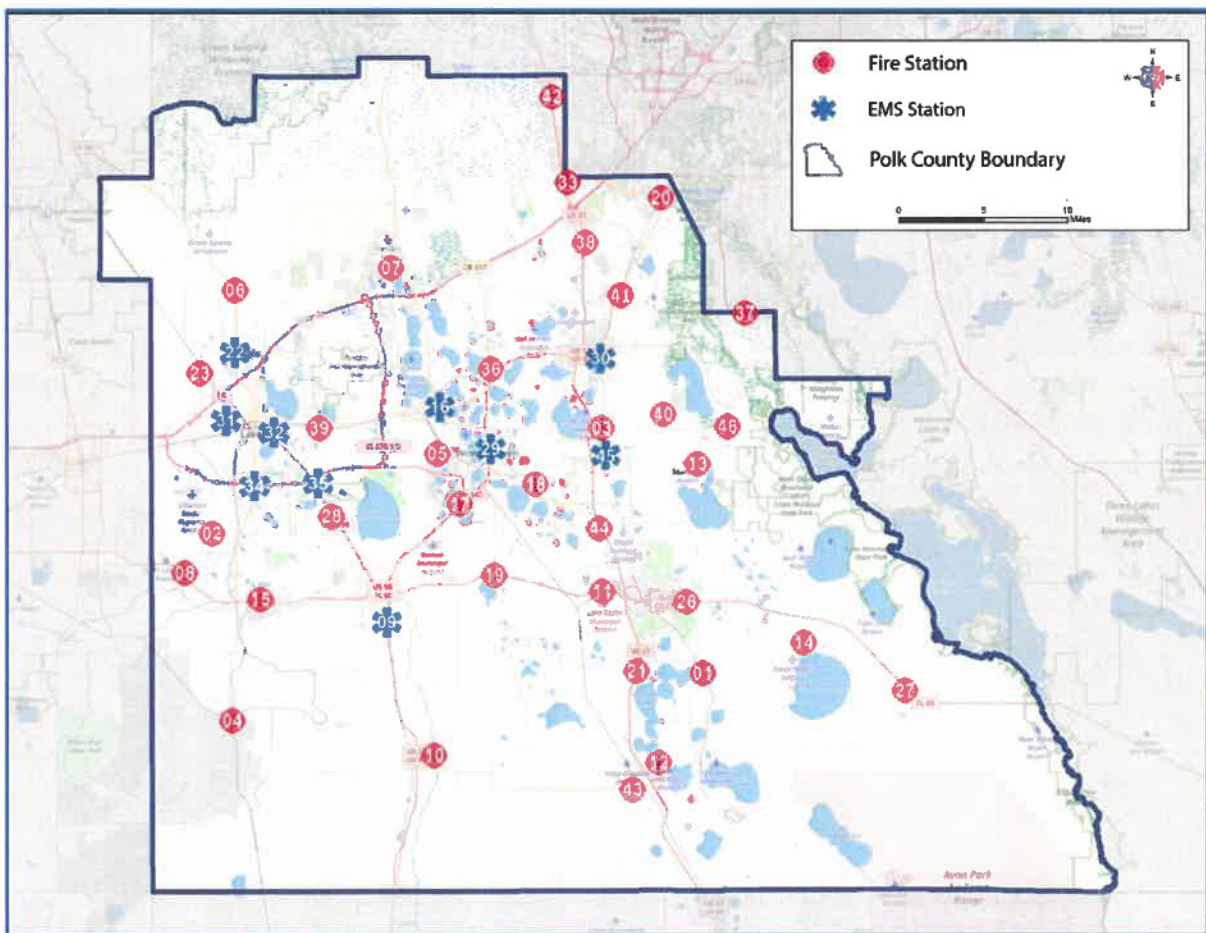
Polk County contains seventeen municipalities, ranging from a tiny village to a metropolitan city, along with twenty-four unincorporated, populated areas. Counties bordering Polk County include:

- North: Lake County
- Northeast: Orange County
- East: Osceola County
- Southeast: Okeechobee County, Highlands County
- South: Hardee County
- Southwest: Manatee County
- West: Hillsborough County
- Northwest: Pasco County, Sumter County

Polk County lies inland, centered between the Atlantic to the east and the Gulf of Mexico to the west. Because of this, Polk County is not affected as much by hurricanes as the more coastal counties to its east and west. It has, however, been affected by major hurricanes within historical record, including ones that would produce tremendous damage if they were to happen again. The second-greatest threat after tropical cyclones, both financially and in terms of potential for loss of life and property damage, is the threat created by fresh water flooding. Major winds above 100 mph are possible from hurricanes in Polk County, but have not been recorded in modern times. The County is also subject to large wildfires affecting urban-interface communities.

The next figure shows the locations of Polk County's fire and EMS stations.

Figure 1: Polk County Study Area



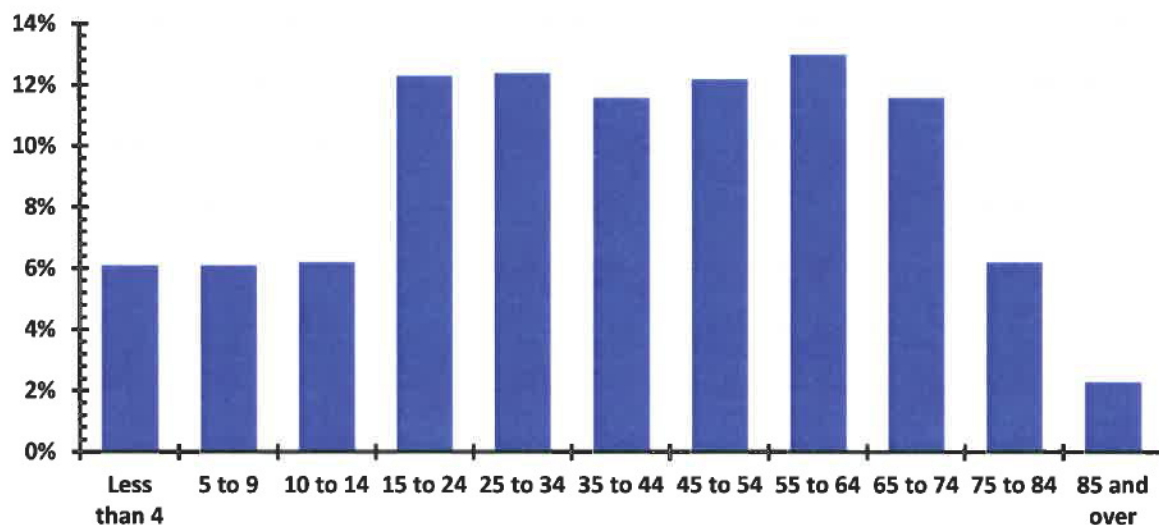
Study Area Population³

As of 2017, Polk County's estimated population of 686,483 (86% urban and 14% rural) had a demographic make-up spread evenly across ages 15–74 years, which is consistent with Florida as a whole, but slightly older relative to the U.S. The median age of the population is continuing to increase; the proportion of the population over 55 is increasing while at the same time, that under 18 is decreasing in comparison to estimates from 2015. This follows a large national trend where the median age of the population is projected to climb over the next several years. These statistics suggest that while Polk County is attractive to retirees yet still maintains a fair share of families (as evidenced by the high representation of the population under 18 years old), it showed signs of increased median age in the past year.

There were 298,229 housing units in the County as of 2016, with 52.2 percent of those being owner-occupied; 27.3 percent renter-occupied, and 19.5 percent vacant housing units. While Polk County exceeds the state and nation in homeownership, it lags in multi-unit housing. The lack of multi-unit availability may be explained by several factors including: a significant advantage in single-family home affordability, underdeveloped land, and demographic make-up. In addition to having a higher ownership rate, Polk County also has a higher rate of homes without mortgages relative to the Florida and the nation. This is a function of both the lower property values and the larger proportion of older residents compared to the state and nation.

The ages of Polk County's 2016 estimated population were broadly distributed as shown in the following figure with 6.1 percent under the age of 4 years, 6.1 percent ages 5–9, 6.2 percent ages 10–14, 12.3 percent ages 15–24, 12.4 percent ages 25–34, 11.6 percent ages 35–44, 12.2 percent ages 45–54, 13 percent ages 55–64, 11.6 percent ages 65–74, 6.2 percent ages 75–84, and 2.3 percent age 85 and over. The median age for residents in Polk County is 40.4 years young.

Figure 2: Polk County Population by age Group Summary, 2016



³ Retrieved from: <https://www.census.gov/quickfacts/polckountyflorida>.

Age and sex demographics are provided in the following figure which provides a percentage comparison between Polk County and the State of Florida.

Figure 3: Age and Sex Percentage Comparisons¹

Age/Sex	Polk County	State of Florida
Persons under 5 years	5.8%	5.4%
Persons under 18 years	22.3%	20.0%
Persons 65 years and over	20.1%	20.1%
Female persons	51.0%	51.1%

¹U.S. Census Bureau

Based on the preceding figure, 20.1 percent of the population is 65 years of age or older and five percent of the population is under five years of age. This statistic places a total of 25.9 percent of the County's population within the age groups that are at higher risk of being injured or killed in a fire⁴.

The young also represent a vulnerable population, regarding both their limited ability to escape a structure fire as well as their susceptibility to serious medical ailments such as asthma, traumatic events, choking, or injury from vehicular accidents.

⁴ National Fire Protection Association, 2007; Urban Fire Safety Project, Emmitsburg, MD; retrieved from <http://www.nfpa.org/public-education/by-topic/people-at-risk/urban-fire-safety/reports-and-presentations>

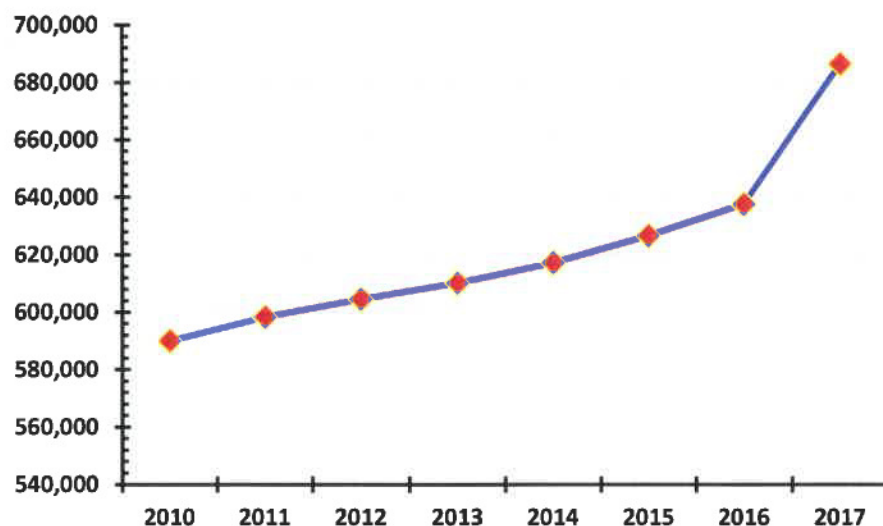
Figure 4: Other Demographic Comparisons¹

Subject	Polk County	State of Florida
Persons without health insurance, under age 65 years	15.8%	15.9%
Person with a disability, under age 65 years	10.7%	8.6%
Owner Occupied Housing Rate, 2012–2017	68.3%	64.8
Median household income (in 2017 dollars), 2012–2017	\$45,988	\$50,883
Persons in Poverty	16.1%	14.0%

¹ U.S. Census Bureau

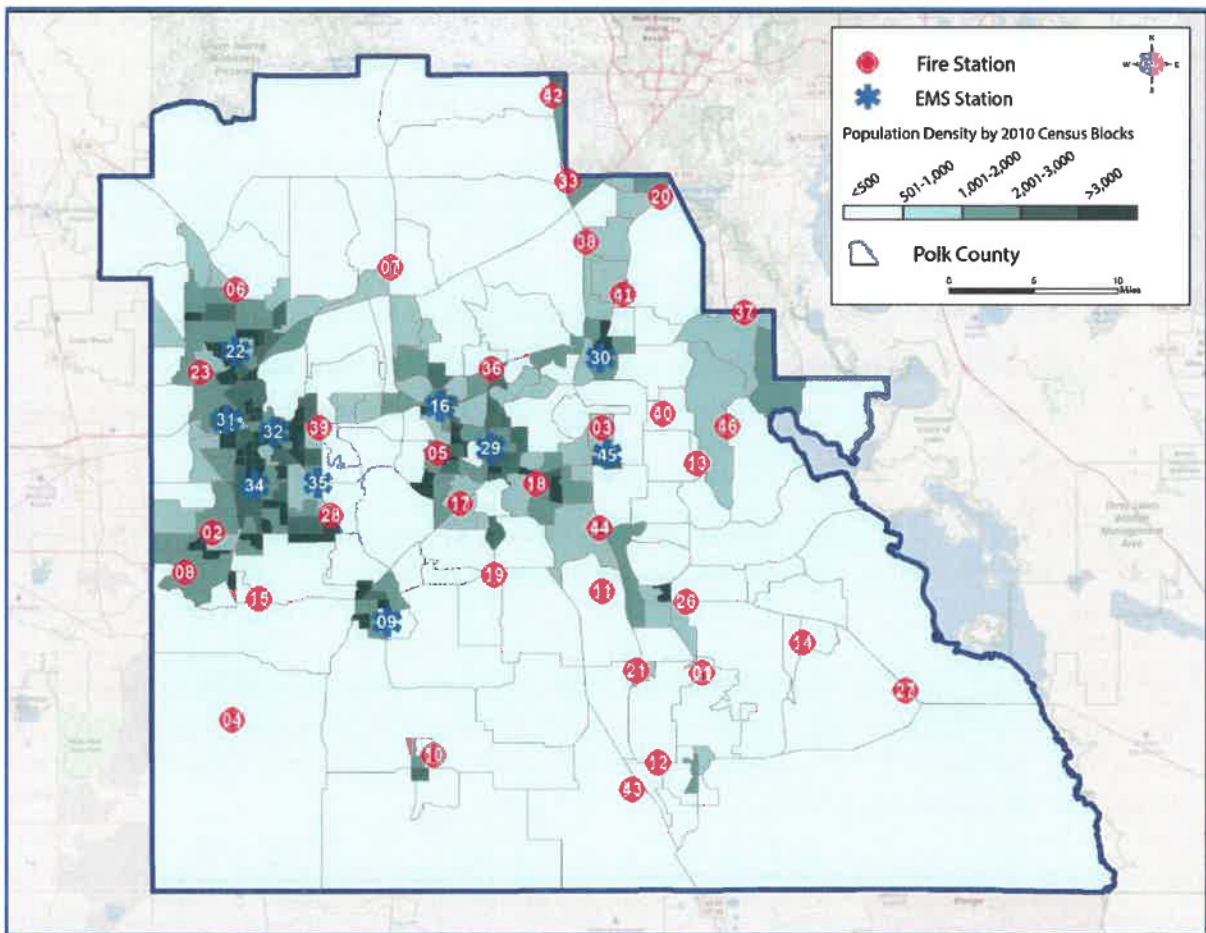
The demographics displayed in Figure 4 are factors which indicate a population that is more likely to use fire department services than other populations. Individuals with no health insurance may be more likely to use local EMS resources compared to individuals with health insurance and a personal physician. The percentage of people without health insurance is equal to that found statewide. The percentage of owner-occupied houses is higher in Polk County than found statewide. A high percentage of owner-occupied homes may indicate a more stable community and residents willing to invest in their community and community services. In 2017, the median household income was \$45,988; however, 16.11 percent of Polk County residents live in poverty.

The next figure shows the population changes for Polk County from 2010–2017.

Figure 5: Population Changes Polk County (2010–2017)⁵

The population density map shown in the next figure illustrates the population centers in the County. Generally, the areas of highest population density are clustered across the center part of the County along and south of the I-4 corridor.

⁵ Retrieved from: https://factfinder.census.gov/bkrmk/table/1.0/en/ACS/17_5YR/DP05/0500000US12105.

Figure 6: Population Density in the Study Area⁶

History, Formation, and General Descriptions

While Florida gained statehood in 1845, it was not until 1861 that Polk County was created from the eastern part of Hillsborough County. It was named in honor of former U.S. President James K. Polk; whose 1845 inauguration was on the day after Florida became a state.

Since the late 20th century, growth in Polk County has been driven by its proximity to both the Tampa and Orlando metropolitan areas along the Interstate 4 corridor. Recent growth has been heaviest in Lakeland and the Northeast areas of the County near Haines City. From 1990 to 2000, unincorporated areas grew 25 percent, while incorporated areas only grew 11 percent. Despite the impressive growth rate, the unemployment rate in Polk has typically been higher than that of the entire state.

Polk is one of 20 charter counties in Florida. The charters are formal written documents that confer powers, duties, and/or privileges on the County. The purpose of a charter is to grant the County electorate greater control over their regional affairs.

⁶ Source: U.S. Census Bureau, 2010 Census Blocks.

The Polk County Charter was developed in 1997 by a Charter Commission appointed by the County Commission and the Constitutional Officers (Sheriff, Clerk of Courts, Supervisor of Elections, Tax Collector, Property Appraiser). The Charter Commission developed the Charter and submitted it to the voters for their reaction in the November 1998 general election. Voters approved it by a wide margin. The charter was last updated November 6, 2018.

Privileges or rights conferred through a Florida Charter that are not available to non-charter counties include the following:⁷

- The structure of government can be tailored by the electorate to meet the needs of the county.
- The charter may provide for initiatives, referendum, and recall at the county level.
- The charter can require an Administrative Code detailing all regulations, policies, and procedures.
- The charter can provide that a "municipal utility tax" be levied in the unincorporated area.

During the 2004 Atlantic hurricane season, three hurricanes, Charley, Frances, and Jeanne all tracked over Polk County, intersecting in a triangle that includes the City of Bartow.

Fire Rescue

The Polk County Fire Rescue (PCFR) department began as an idea and a dream in the late 1950s. Prior to its inception, many fire calls in the unincorporated areas of the County were not responded to by any fire department. Homes and other property were literally burning to the ground and volunteer fire departments struggled to operate and raise funds.

Through the efforts of the Board of County Commissioners, and a committee from the Polk County Mutual Aid Fire Association, a Fire Ordinance was developed for the unincorporated areas of the County assuring that structure fire calls would be answered throughout the county. The ordinance provided for the charge of a fire fee with funds providing operating revenue to existing volunteer fire departments. It also helped create new departments to provide fire protection in areas not protected by any fire department.

The ordinance also provided for the County to enter into contracts with municipalities. These Outside Protection Agreements (OPAs) negotiated with the cities provided fire coverage to unincorporated areas of the County immediately surrounding municipal boundaries, therefore reducing response time and assuring that all structure fires in the unincorporated areas would be responded to by a fire department. The Board of County Commissioners placed a referendum on the general election ballot in 1974 which passed by a two-to-one margin.

⁷ Retrieved from: www.fl-counties.com, Basic Differences Between Charter & Non-Charter Counties.

After the referendum was passed, the Commission approved construction and staffing of an emergency vehicle repair facility and began repairing, refurbishing, and fabricating fire apparatus for use by volunteer fire departments. Eleven new mini-pumpers, and two new full-size pumpers were purchased and placed in service. One hundred fifty sets of structural firefighter protective clothing, 40,000 feet of fire hose, ladders, breathing apparatus, nozzles, and fire extinguishers were purchased. A countywide two-way FM communications system was established and put into service. New fire stations were built, some existing fire stations were repaired, and additional volunteer fire departments were formed.

The growth of Polk County Fire Rescue has been steady over the first 25 years. In 1985, the County implemented a lease/purchase program for apparatus and equipment to upgrade a seriously aging and outdated fleet. This program allowed for the immediate delivery of the equipment, with the payments spread over the next five years. The lease included 20 full-size pumpers, brush vehicles, one aerial platform, one haz-mat command vehicle, and one large capacity mobile breathing air compressor. The total cost of this lease/purchase was approximately \$4.2 million and was one of the largest single purchases of fire apparatus in North America at that time. Currently, all new apparatus are placed on a vehicle replacement program at the time of purchase to offset inevitable replacement cost.

Although the initial role of the department was support of the various volunteer organizations throughout the County, continual growth and liability issues prompted a re-focus on consolidation into one countywide fire service in 1989. Improvements in radio communications, the addition of Fire Company Lieutenants as field supervisors, and a new Computer Aided Dispatch (CAD) system all helped to mold the independent volunteer fire coverage zones into one large fire service. These improvements resulted in the development of near "seamless service" delivery system for the department's customers.

The Board of County Commissioners authorized an Insurance Services Office (ISO) study in 1995. The County had multiple ISO ratings throughout the unincorporated area, with each County volunteer fire department coverage area different than the next. The goal of this study was to consolidate these areas under one authority and develop a single, countywide ISO class rating. This was not fully accomplished until September 1998, when ISO issued a new improved, countywide class rating of 5/9.

Over the years, several municipalities approached the County requesting fire coverage for their respective jurisdictions. Hillcrest Heights, Polk City, and Eagle Lake have all entered into contractual agreements with the County which have all proven beneficial for city and County residents alike. When Fire District One, a special taxing district, was abolished in 1992, the County stepped in and has been providing service ever since.

In 1993, Polk County Fire Rescue became the first fire agency in the County to provide Advanced Life Support (ALS) service from fire units. Over a period of several years, additional paramedic engines were added and in January 2009, a pilot program was launched where cross-trained (person certified both as firefighters and either EMTs or Paramedics) personnel staffed an ambulance at the Golfview station. In October 2009, five ambulances and 30 positions were transferred from Polk County EMS to Polk County Fire Rescue as part of the Public Safety Service Improvement Plan. Then, on March 25, 2011 County Manager Jim Freeman reorganized County government, eliminating several County departments and folding EMS and Emergency Management into the Fire Rescue Division.

PCSO Communications

In 1974, the Countywide two-way FM communications system for emergency services was established and put into service under management of the Polk County Sheriff's Office. A Countywide Emergency Communications Center (ECC), also run by the Polk County Sheriff's Office, is responsible for receiving and processing emergency and non-emergency calls for service. There are 156 members assigned to the ECC, of which there are approximately 39 members assigned per shift, including supervisors, Training Officers, Quality Assurance Officers, and part-time members. Members of the ECC are responsible for dispatching a Deputy Sheriff when a call for assistance is received and providing information to the Deputy Sheriff in the field. In addition to law enforcement calls for service, the Emergency Communications Center also receives fire and medical calls and dispatches Polk County Fire Rescue and Emergency Medical Services. In 2017, the ECC received 797,480 emergency and non-emergency calls; of those, 96,987 calls were fire and medical calls for service.

Telecommunicators in the ECC receive both agency and state certified training (totaling 2,120 hours) to enhance job performance which focuses on the assessment of situations, gathering pertinent information, and dispatching the appropriate resources in a timely manner. This training includes 232 hours prior to taking the state exam and an additional 316 hours on the communications center floor being mentored prior the being released. They also receive 40 hours of continued training in Priority Dispatch protocols and approximately 50 hours of non-dispatch related training.

Florida Administrative Code 60FF-6.005 (1)(b) (Florida Emergency Communications Number 911 State Plan Technical and Operations Rule) requires that all primary Public Safety Answering Points (PSAPs) be staffed with an adequate number of answering positions to ensure that a minimum of 90 percent of voice calls shall be answered within 10 seconds of call arrival at the PSAP and 20 seconds for Teletypewriter (TTY) calls. This is consistent with the National Emergency Number Association (NENA) recommendation for PSAPs to answer 90 percent of all 911 calls within 10 seconds. In 2017, PCSO answered 99.4 percent of all 911 calls within 10 seconds, as well as 98.7 percent of administrative, non-emergency calls.⁸

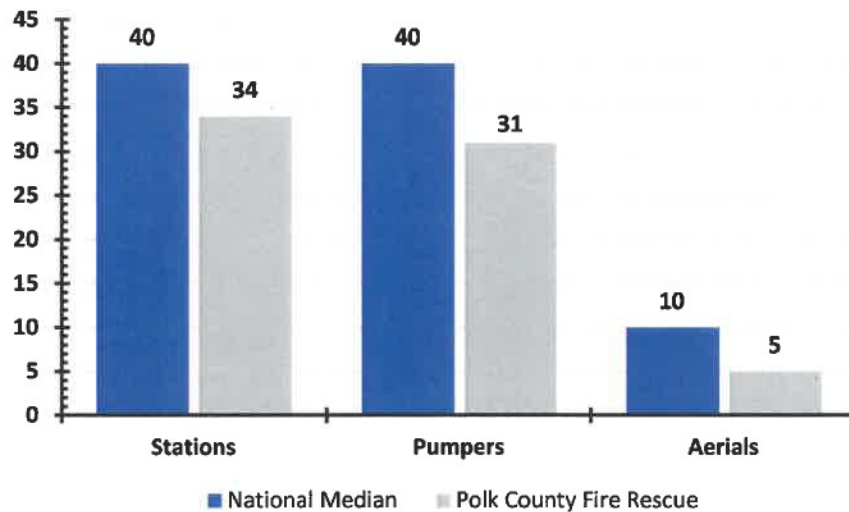
Description of The Current Service Delivery Infrastructure

Fire Rescue

PCFR operates from 44 fixed station locations throughout the County, of which 10 are EMS-only stations. The following figure compares the number of PCFR fire stations (not including EMS-only stations), engines (pumpers), and aerials to a national average by population protected. The graphic is not intended to serve as the definitive answer for the number of stations and apparatus required to serve the citizens of Polk County, but it does serve as a frame of reference for the reader and policy makers to understand resource inventories of similarly sized communities based strictly on population.

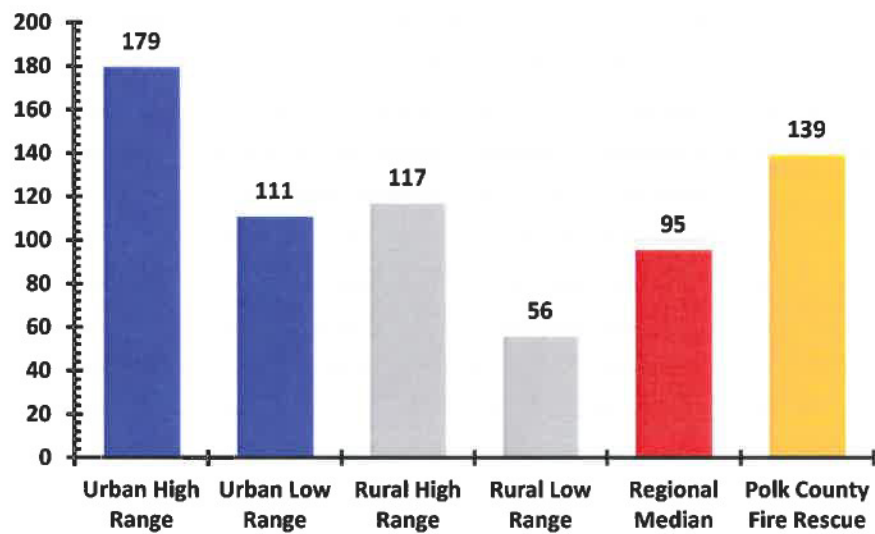
⁸ PCSO Strategic Plan and Budget FY2018–2019, Page 43.

Figure 7: Capital Assets Comparison

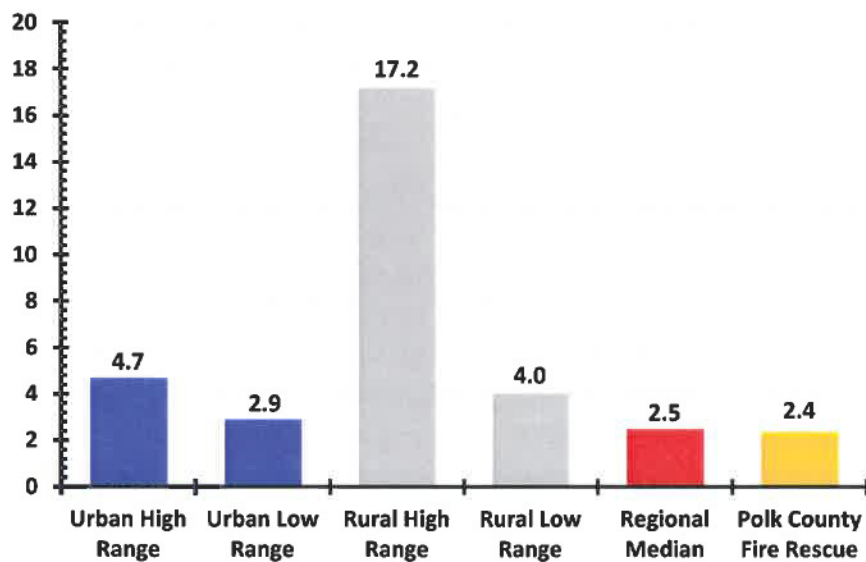


Similarly-sized communities utilize 40 stations, with 40 fire engines and 10 aerial (ladder) units to serve their communities. There are a variety of factors that typically establish the number of stations a community utilizes to provide fire protection services. Often, the inventory of fire stations and associated fleet has evolved over time where different volunteer fire departments have existed and eventually morphed into a common system. In these types of situations, no data analysis has been conducted to determine the number or location of fire stations. Without the supporting data analysis, policy makers have been reluctant to reduce or even reallocate the quantity of stations necessary to provide services. PCFR has fewer total resources than the *National Median* in each category.

The next figure provides a comparison of the total number of emergency incidents per 1,000 population protected from data collected by the National Fire Protection Association (NFPA) from fire departments across the nation. PCFR lies at approximately the mid-point of the national urban low and high range categories. The department is higher than the rural categories and higher than regional median at 139 incidents per 1,000 population. The low and high values are the lowest and highest values by size of community. The median value is chosen so that half the departments had higher values, and half had lower. This figure does not lend itself to decision-making relative to specific types of services to provide the community but is intended to help understand the emergency response workload of the department and its personnel relative to population served.

Figure 8: Incidents per 1,000 Population Comparison

The next figure compares the number of *fires* reported per 1,000 population. PCFR's rate of 2.4 fires per 1,000 in population is slightly lower than the regional median and lower than the urban and rural low range.

Figure 9: "Fire" Incidents per 1,000 Population Comparison

PCSO Communications

The Polk County Consolidated Communications Center is operated by the Polk County Sheriff's Office and is located on the PCSO main campus. The next figure provides a summary of the dispatch services provided by PCSO for the County and cities within Polk County.

Figure 10: Communication Services Provided by PCSO

City	Police	Fire	EMS	911
Auburndale	X	X	X	X
Bartow	—	—	X	X
Davenport	X	X	X	X
Dundee	X	X	X	X
Eagle Lake	X	X	X	X
Fort Meade	X	X	X	X
Frostproof	X	X	X	X
Haines City	X	X	X	X
Lake Alfred	—	—	X	X
Lake Hamilton	X	X	X	X
Lake Wales	X	X	X	X
Lakeland	—	—	X	—
Mulberry	X	X	X	X
Polk City	X	X	X	X
Winter Haven	X	X	X	X
Unincorporated	X	X	X	X

Governance and Lines of Authority

Polk County operates under its own charter rather than a constitution which means that it has more locally granted powers than constitutional counties. Under the Polk County Charter, the Board of County Commissioners (BoCC) is the governing body of Polk County. Each Commissioner is elected by a countywide vote for a four-year term, with a term limitation of eight consecutive years. Each of the five Commissioners must reside in his/her district. Commissioners from Districts One, Three, and Five are elected in Presidential election years; Districts Two and Four are elected in the intervening years. The sheriff remains an elected constitutional officer separate from the BoCC under Article 5.1 of the County charter and is responsible for leading and managing all aspects of the sheriff's office including the Emergency Communications Center.

Elected County officials are subject to recall according to provisions of state law. The state legislature is the only governing body with the power to create, abolish, or consolidate counties.

Each November, a Chairman and Vice Chairman are elected by the members of the County Commission. The Chairman selects the various Board Committee Chairmen who, in turn, work with the County Manager and the staff in developing and establishing Board policies.

The County Manager is the head of the County government's administrative branch, which is established by the Polk County Charter. The County Manager is responsible for the proper administration of all affairs of the County under the purview of the BoCC. In this role, he/she also executes the Board of County Commissioners policy direction, with the Commission serving as the County's legislative branch of government.

The County Manager prepares the Board of County Commissioners' meeting agendas and attends and participates in its public meetings. Except for the County Attorney's office, the County Manager appoints and manages the County Commission's nearly 2,000 employees. The County Manager also presents a proposed balanced budget each year and is responsible for proper administration of the Board of County Commissioners' adopted budget. The County Manager has three assistants under him/her: one overseeing Infrastructure; one overseeing Support and Human Services; and one overseeing Public Safety. The Polk County Fire Chief reports directly to the Assistant County Manager for Public Safety.

Foundational Policy Documents

Fire Rescue

Consistent with other fire and EMS services nationally and even globally, PCFR functions in a paramilitary manner. This is to ensure that when personnel are engaged in rapidly changing circumstances in an emergency, clear and concise direction from a central authority (Incident Commander) is followed without delay. Cultural norms tend to relax the formality of this structure during routine operations, but it is nonetheless followed. The paramilitary structure must be supported by a standardized set of rules, regulations, and policies that guide appropriate behavior and accountability. These guiding documents are vital for success in all phases of fire department operation and at all levels.

PCFR has a complete set of regulatory documents, both providing guidance and directive in nature. Training is conducted on the PCFR policies. The PCFR's Rules and Regulations, along with the Standard Operating Procedures (SOPs), are continuously reviewed and changes are made as needed. The SOPs are utilized in training evolutions. The regulatory documents are internally reviewed for consistency and for legal mandates. Additionally, policy reviews are a component of the Commission on Accreditation of Ambulance Services (CAAS) accreditation process and further training is completed as part of monthly training on the training platform—Target Solutions.

Organizational Design

Fire Rescue

Polk County Fire Rescue (PCFR) provides high quality fire suppression services within the unincorporated County as well as responding to requests for service from adjacent municipalities. Fire suppression services are provided from 44 stations distributed throughout the County. There are 34 fire stations staffed on a full-time basis 24 hours per day, 7 days per week with career personnel. All members are trained and certified by the State of Florida as firefighters and either Emergency Medical Technicians (EMTs) or Paramedics (dual certified). Additionally, there are 10 EMS only stations staffed by single certified EMT and paramedics (not fire certified). The following is a description of minimum and maximum staffing configurations; not including cross-staffed units such as water tenders, technical rescue, and vegetation fire vehicles. These cross-staffed unit are staffed at the time of need by reducing the crews on other units in the same station.

In total, PCFR operates the following response units:

- 31 Structural Engines/Pumpers
- 5 Ladder Trucks
- 38 Ambulances (staffed with either ALS non-fire personnel and/or ALS certified firefighters)
- 7 Command Vehicles (Battalion Chiefs)
- 9 Water Tenders
- 22 Wildland Apparatus
- 2 Air Trucks
- 1 Utility Truck
- 1 Public Information Officer (PIO)
- 2 Public Educators

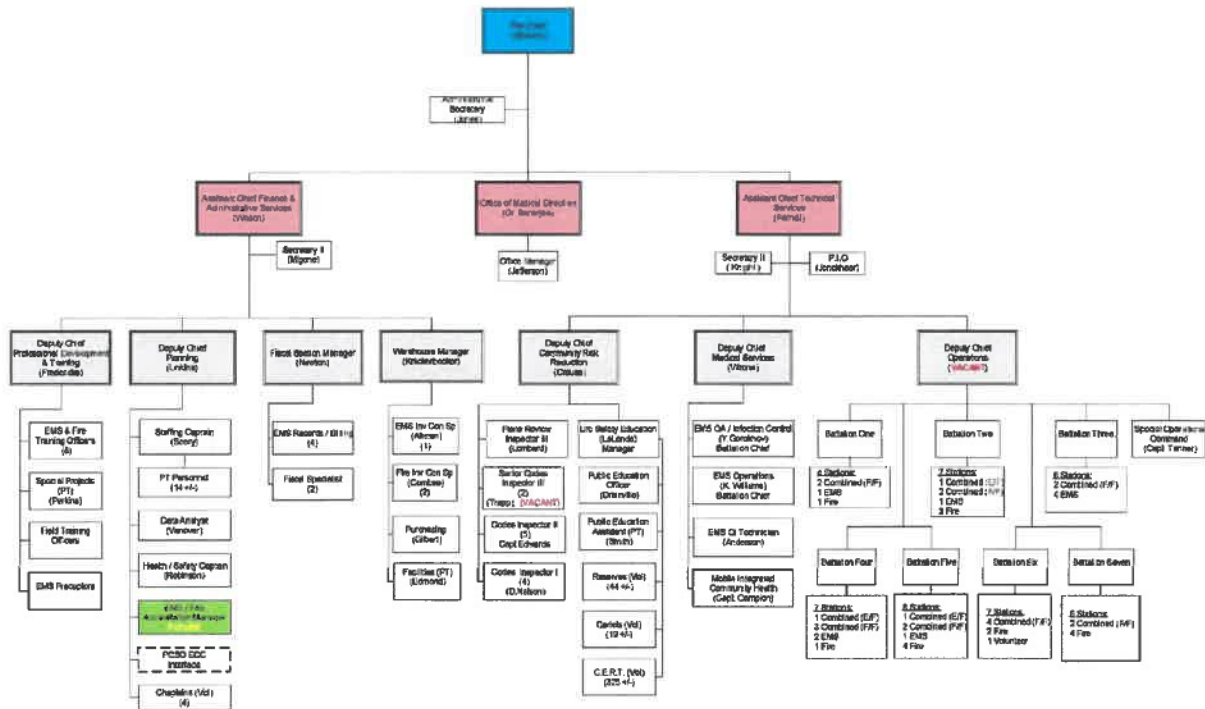
PCFR provides special operations for hazardous materials and technical rescue services within the County.

The Polk County Fire Rescue organizational chart is reflected in the following figure.

Figure 11: PCFR Organizational Chart

November 30, 2018

Polk County Fire Rescue



Public Protection Classification: Insurance Services Office Rating Bureau

As of August 1, 2017, PCFR has a Public Protection Classification (PPC) rating of Class 3/3X from the Insurance Services Office (ISO). This rating is what many insurance companies' base annual fire insurance premiums on for privately insured properties. The higher the PPC class, the greater the likelihood that individual property insurance premiums will increase, especially for commercial properties. Therefore, A PPC of 1 represents a superior level of property fire protection. A PPC of 10 indicates that the area's fire suppression program does not meet minimum criteria.

The PPC rating also provides fire departments with valuable benchmark data and is used by many departments as a valuable tool when planning, budgeting, and justifying fire protection improvements. ISO's PPC rating schedule evaluates four major areas: Emergency Communications (10 percent: emergency reporting, telecommunications, dispatch circuits); Fire Department (50 percent: engine companies, reserve pumpers, pumper capacity, ladder service, reserve ladder and service trucks, deployment analysis, company personnel, training, and operational considerations); Water Supply (40 percent: supply system, hydrants, inspection, and flow testing); and provides extra credit for Community Risk Reduction. Ten points are available in the category of Emergency Communications, 50 points are available for Fire Department, 40 points are available for Water Supply, and an additional 5.50 points are available for Community Risk Reduction programs for extra credit. Points are deducted if the capabilities of the water supply system and the fire department are too divergent.

The PPC rating or grade assigned to the community will depend on the community's score on a 100-point scale. The best rating is a one, with ten meaning that the community does not meet minimum Fire Suppression Rating Schedule (FSRS) criteria for recognition, including areas that are beyond five road miles of a recognized fire station.

The following figure is a summary of the most recent rating for PCFR.

Figure 12: Public Protection Classification Summary Report August 1, 2017

FSRS Feature	Credit Available	Earned Credit
Emergency Communications	10	9.94
Fire Department	50	29.91
Water Supply	40	31.30
Divergence	—	- 3.69
Community Risk Reduction	5.5	4.91
Total	5.5	72.37

Emergency Medical Services

PCFR is the sole-provider of patient transportation (ambulance) services within Polk County. Ambulance services are provided at the Advanced Life Support (ALS) level. Many local and/or municipal fire departments also provide fire response service for EMS calls in addition to PCFR. Fifteen of PCFR's 31 engine companies are staffed at the ALS level and the remaining 16 engines are Basic Life Support (BLS). Additionally, PCFR deploys 20 ALS medic units and 18 ALS Fire Rescue units (ambulances) for a total of 38 ALS ambulances per day.

Hazardous Materials

PCFR provides hazardous materials response to the unincorporated County and participates with the local municipalities as well for mutual aid hazardous materials response.

Technical Rescue

PCFR provides technical rescue response to the unincorporated County and participates with the local municipalities as well in mutual aid response to specialized rescue situations.

The next figure is a summary of the special operations equipment and personnel assigned during the shift.

Figure 13: Polk County Fire Rescue Special Operations Units and Staffing Levels

Type of Special Operations Incident	Assets	Staffing per Shift
HazMat Response	4 Squads 1 Heavy Rescue	5+ per shift
Tech. Rescue-Confined Space Operations level	4 Squads 1 Heavy Rescue	Typically, 9–12
Tech. Rescue-High Angle Operations level	4 Squads 1 Heavy Rescue	Typically, 9–12
Tech. Rescue-Swift Water	All Units Throw bags and PFDs	Awareness Only
Tech. Rescue-Trench & Collapse Operations level	4 Squads 1 Heavy Rescue	Typically, 9–12
Vehicle Extrication Basic and Operations level	4 Squads 1 Heavy Rescue All Engines	Typically, 9–12 on Special Ops Units
Structural Building Collapse Operations level	4 Squads 1 Heavy Rescue	Typically, 9–12

PCSO Communications

Although Polk County is a charter county, the Sheriff as an elected constitutional officer separate from the BoCC is fully responsible for leading and managing all aspects of his department independent of the BoCC. The PCSO ECC is a branch of the Polk County Sheriff's Office under the Department of Law Enforcement.

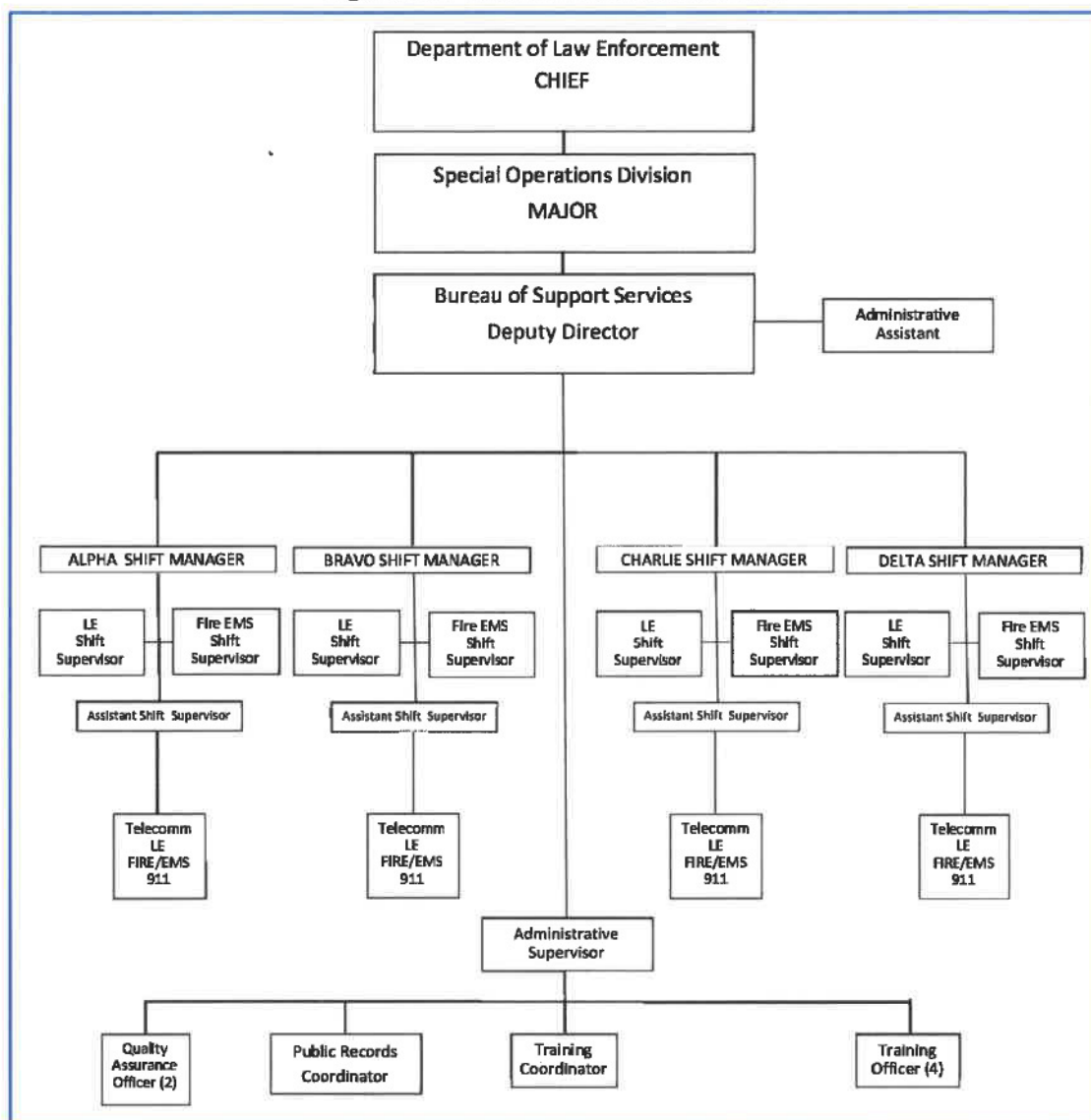
Administrative

The administrative staff consists of a Chief, Major, and Deputy Director with an Administrative Assistant. The Deputy Director is then responsible for the day-to-day operation of the center to include the dispatch staff and an administrative staff that includes an Administrative Supervisor who oversees duties such as Quality Assurance, Public Records, and Training.

Dispatch Floor

The dispatch floor is divided into four shifts, Alpha, Bravo, Charlie, and Delta. Each shift consists of a Manager, Law Enforcement Supervisor, Fire EMS Supervisor, Assistant Supervisor, and Telecommunicators for 911, Law, and Fire/EMS.

Figure 14: PCSO ECC Chain of Command



MANAGEMENT COMPONENTS

Effective department management is a complicated and expanding challenge for service leaders. With increasing complexity comes increased cost. Today's department must address management complexities that include an effective organizational structure, setting and measuring levels of service, staying abreast of new technologies and methods, evaluation and maintenance of a qualified workforce, staff development for effective succession, and financial sustainability for the future.

Mission, Vision, Strategic Planning, Goals and Objectives

Polk County Fire Rescue established statements of its organizational mission, vision, and core values. Doing so establishes the foundation upon which the organization provides services to its community.

The purpose of the mission is to answer the following questions:

- Who we are?
- Why do we exist?
- What do we do?
- Why do we do it?
- For whom?

PCFR's Mission Statement is:

*The mission of Polk County Fire Rescue is to work in partnership
with our community to protect lives and property.*

Vision statements help to describe the organization's purpose. Additionally, vision statements give direction for employees' behavior and help provide inspiration.

PCFR's Vision Statement is:

A united and professional team committed to excellence and innovation in public service.

Establishing values and associated statements embraced by all members of an organization is extremely important. They recognize those features and considerations that make up the personality of the organization.

PCFR's Organizational Values are described in the next figure:

Figure 15: Values of PCFR

Value	Description
Integrity	Ownership in doing the right thing. Commitment... to our community, our fellow teammates, and the profession.
Respect	For those we serve and protect as well as our fellow teammates.
Excellence	In all we do.
Pride	In our service, in our dedication, in our community.

Internal Assessment of Critical Issues

Public safety agencies routinely face a complex array of new critical issues and emerging challenges. PCFR's Fire Rescue Services Director has listed the following critical issues facing the organization.

Figure 16: Critical Issues Identified by Fire Rescue Services Director

Critical Issue	Description
First	Personnel and staffing; specifically, shortages and experience.
Second	Equipment – Resources – Apparatus – Stations
Third	Training, lack of training facilities, and operationally inexperienced personnel.
Fourth	Overtime frequency—voluntary and mandatory.

The items in the previous figure require engaging with PCFR leadership, the County Manager, and the County Commissioners to develop strategies to address root causes and potential solutions. Doing so not only will improve service to the community, it will likely result in an improved Public Protection Class (PPC), lowering some annual fire insurance premiums within the County.

Internal and External Communications Processes

PCFR invests considerable time and effort into its internal communications. There are regularly scheduled staff meetings; which are held every Wednesday (Daily Operational Call). All PCFR personnel have email addresses assigned during the new hire orientation process. Written Operational Memoranda are issued by the Operations Chief. Weekly videos are utilized in lieu of a newsletter to get information out to personnel. Member forums (all meetings) are not conducted in the department. The Fire Rescue Services Director (the Fire Chief) and his executive staff are always accessible and there is a vertical communication path clearly identified (chain of command).

External communication is more dependent upon the broader County by utilizing the department's website and social media (Twitter and Facebook). No community newsletter is issued to County citizens. PCFR does have a formal complaint process in place and does not issue or utilize community surveys.

Reporting and Recordkeeping

In any organization, documentation of activities is of paramount concern. Sound management decisions cannot be assured without the collection and analysis of meaningful data, which is gathered in records routinely.

PCFR has implemented sound processes for documentation control. Public records access is provided for by both County and department policy. Hard copy records are secured by lock and key in file cabinets or locked in offices, as well as stored in the County records depository. All computer files are backed up daily on- and off-site. Electronic files are secured by passwords (as per County IT Administrative Standard) which are assigned to users with rights to appropriate documents. The software utilized for documenting fires is Four Square and Informfire. Software utilized to document EMS incidents is Health EMS.

PCFR provides yearly budget reports to elected officials along with program budgetary reports. Operational reports are posted on the BoCC website. All testing records are in place for patient care reports, exposure records, and hose testing. Maintenance records of self-contained breathing apparatus (SCBA), ladders, hose, and breathing air from the cascade system are kept by third party contractors. Pump testing is performed internally on an annual basis. Vehicle maintenance records are retained by Polk County Fleet, and gas monitor calibration is done internally by a Support Services Captain during the first week of each month.

STAFFING

An organization's greatest asset is its people. It is important that special attention be paid to managing human resources in a manner that achieves maximum productivity while ensuring a high level of job satisfaction for the individual. Consistent management practices combined with a safe working environment, equitable treatment, opportunity for input, and recognition of the workforce's commitment and sacrifice are key components impacting job satisfaction.

The size and structure of an organization's staffing is dependent upon the specific needs of the organization. These needs must directly correlate to the needs of the community and a structure that works for one entity may not necessarily work for another agency. This section provides an overview of Polk County Fire Rescue's (PCFR) staffing configuration and management practices.

Fire department staffing can be divided into two distinctly different groups. The first group is what citizens typically recognize and is commonly known as the operations unit, which can be generally classified as the emergency response personnel. The second group typically works behind the scenes to provide the support needed by the operations personnel to deliver effective emergency response and is commonly known as the administration section.

Administration and Support Staffing

One of the primary responsibilities of the response team's administration is to ensure that the operational segment of the organization has the ability and means to respond to and mitigate emergencies in a safe and efficient manner. An effective administration and support services system is critical to the success of a response agency.

Like any other part of a county fire rescue agency, administration and support need appropriate resources to function properly. Analyzing the administrative and support positions within an organization can create a common understanding of the relative resources committed to this function compared to industry best practices and similar organizations. The appropriate balance of administration and support compared to operational resources and services is critical to the success of the department in accomplishing its mission and responsibilities.

Typical responsibilities of the administration and support staff include planning, organizing, directing, coordinating, and evaluating the various programs within the department. This list of functions is not exhaustive, and other functions may be added. It is also important to understand these functions do not occur in a linear fashion and can more often occur concurrently. This requires the Fire Chief and administrative support staff to focus on many different areas at the same time.

The following figure reviews the administration and support organization of Polk County Fire Rescue:

Figure 17: Polk County Administrative Staffing

Position Title	Number of Positions	Hours/Week	Work Schedule
Fire Chief	1	40	M-F
Deputy Chief	5	40	M-F
Assistant Chief	2	40	M-F
Administrative Battalion Chief	2	40	M-F
Administrative Captain	12	40	M-F
Administrative Lieutenants (Fire Code Inspector II)	6	40	M-F
Fire Code Inspector I	4	40	M-F
Total	32		

Figure 18: Polk County Non-Uniformed Administrative Support Personnel

Position Title	Number of Positions	Hours/Week	Work Schedule
Executive Assistant	1	40	M-F
Administrative Assistant	2	40	M-F
Ambulance Billing Supervisor	1	40	M-F
Financial Administrator	1	40	M-F
Fiscal Specialist II	3	40	M-F
Fiscal Specialist III/HR Specialist	1	40	M-F
Ambulance Billing Analyst	3	40	M-F
Warehouse Manager	1	40	M-F
Data Analyst	1	40	M-F
Stock & Supply Storekeeper and Drivers	3	40	M-F
Fire & Life Safety Education Manager	1	40	M-F
Fire & Life Safety Education Officer	1	40	M-F
Inventory Control Specialist Fire/EMS	2	40	M-F
Office Manager I	1	40	M-F
Professional Standards Investigator	1	40	M-F
Quality Assurance Technician	1	40	M-F
Total	24		

Administration

The administrative function within the department is currently established with the position of Fire Rescue Services Director (Fire Chief), two Assistant Chiefs, five Deputy Chiefs, two Battalion Chiefs, and 12 Captains. One Assistant Chief oversees Finance and Administration while the other oversees Technical Services. Each Deputy Chief oversees one of the following categories: Professional Development and Training; Planning; Community Risk Reduction; Medical Services and Operations. There are two Battalion Chiefs assigned Medical Services—one over EMS Quality Assurance and one over EMS Operations. The 12 Administrative Captains are in the following areas: Training Officer I and II; Community Paramedicine Program Administrator; Health and Safety Officer; Special Operations; Plans Review III, and Senior Fire Code Inspector III.

Administrative Support

Polk County Fire Rescue currently operates with enough administrative support. As illustrated in the previous figure there are 24 non-uniformed personnel that ensure that the day to day operations of the department are handled.

Operational Staffing Levels

The operations staff comprises the members that staff the response resources and provide the various emergency response functions described previously. The operations staff members are assigned to the following schedule; 24 hours-on followed by 48 hours-off. This averages to a 56-hour work week. The following figure shows the total of operational personnel by position.

Figure 19: Operations Staffing

Position Title	Number of Positions	Hours/Week	Work Schedule
Battalion Chiefs	21	56	24/48
Captains	105	56	24/48
Engineers/Apparatus Operators	105	56	24/48
Firefighter/Paramedics	256	56	24/48
Firefighter Trainees	7	56	24/48
Non-fire EMTs	21	56	24/48
Non-Fire Paramedics	46	56	24/48
Total	561		

PCSO Communications

The Emergency Communications Center (ECC) is responsible for receiving and processing emergency and non-emergency calls for service. Of its 156 members, approximately 39 are assigned to each of four shifts. On each 12-hour shift (7 am to 7 pm and 7 pm to 7 am) there are three Dispatchers assigned to the fire console and five Call-takers. It should be noted that there are dispatchers that are cross-trained in both disciplines and can work either Law or Fire.

Staff Allocation to Various Functions and Divisions

PCFR allocates its staffing differently across each of its 44 fire stations based on the specific geographic requirements and service level needs of the area served by the station. Sixteen stations are staffed with five personnel per station of which one is a Company Officer, one an Apparatus Operator, and one Firefighter/EMT/Paramedic on the engine, and two personnel assigned to a medical rescue (ambulance) unit. Nineteen stations have two personnel assigned as either Firefighter/Paramedics on a medical rescue or assigned to the engine. Twelve stations have three personnel assigned per shift which covers an engine complement of people (Company Officer, Apparatus Operator, and Firefighter/EMT/Paramedic).

PCFR requires a minimum staffing per response unit of two for most response units. Five stations have an aerial (ladder truck) assigned in addition to the pumper with two personnel assigned in addition to the other personnel assigned to the shift. Many of the stations are equipped with tankers and/or brush truck apparatus. If these units are required to respond, the apparatus staff must move from their current apparatus assignment (engine, ladder, or rescue unit) and relocate to the required or requested apparatus (the concept of "cross-staffing").

Each of the seven battalions are distributed geographically to provide necessary command and control coverage during incidents and manage the administrative duties for their respective battalions. Further, two EMS Captains are geographically separated to provide support as needed for EMS-related issues and to serve as the Incident Safety Officer. The department maintains its Special Operations Squad units at Stations 7, 8, 21, and 38. Squads are the only apparatus with a minimum staffing level of three personnel, one of which is a Company Officer. Additionally, Station 9 (Bartow) has an unstaffed heavy rescue assigned to it. If it is needed, then the engine crew will respond in it and leave the engine unstaffed.

The allocation of five personnel per shift across the stations and units (three on an engine and two on a rescue for a station staff of five) is a typical staffing model across the United States for career organizations. The total allocated staffing available in the County across all three shifts is 561. Daily shift staffing based on minimum station and unit assignment is 163, plus six on the day time medic units and seven Battalion Chiefs for a total of 176 during the day. At night, when the six daytime medical rescues go out of service, staffing will fall to 170.

The following figure describes the overall staffing allocation for Polk County Fire Rescue by function or division including full-time, part-time, and volunteer personnel. The total department staffing level is approximately 1,021 and includes four Volunteer Chaplains, part-time employees, Reserves/Volunteers, Cadets, and Community Emergency Response Team (CERT) members.

Figure 20: Staffing Allocation to Functions and Divisions

Function/Division	Positions
Fire Chief's Office	2
Assistant Chief of Finance and Administrative Services	2
Assistant Chief of Technical Services	3
Deputy Chief of Professional Development and Training	8
Deputy Chief of Planning	4 4 volunteer Chaplains 14 (+/-) PT personnel
Fiscal Section Manager	7
Warehouse Manager	6
Deputy Chief of Community Risk Reduction	16 44 (+/-) Reserves (Vol) 19 (+/-) Cadets (Vol) 325 (+/-) CERT members
Deputy Chief of Medical Services	5
Deputy Chief of Operations	562
Total	1,021

Firefighter/EMS Staff Distribution

There are 561 uniformed operational positions of various ranks, certifications, and assignments. They are typically broken into companies of two or three for a fire engine or aerial apparatus, with a Company Officer, Driver/Operator, and Firefighter/EMT/Paramedic. Single-certified EMS personnel are typically assigned to companies of two personnel with at least a Paramedic assigned who serves as the lead member on the unit. Additionally, PCFR has brush trucks, tenders, and squads within their stations that may or may not have personnel assigned to them.

The next figure is a summary of personnel and units assigned to the various stations.

Figure 21: Operations Firefighter/EMS Staffing Distribution

Station	Units	Personnel
1 Babson Park	Ladder	3
2 Medulla I	Engine Ladder (CS ¹) Rescue	5
3 Lake Hamilton	Engine Brush (CS ¹)	3
4 Bradley Junction	Engine Tender (CS ¹) Brush (CS ¹)	3
5 Jan Phyl	Engine Rescue Medic (Day Only)	5 2 – Day Medic Unit

Station	Units	Personnel
6 Providence	Engine Tender (CS ¹) Brush (CS ¹) Rescue	5
7 Polk City	Squad Brush (CS ¹) Rescue	5
8 Willow Oak	Squad Brush (CS ¹)	3
9 Bartow EMS	Rescue	2
9 Bartow	Engine Heavy Rescue (CS ¹)	3
10 Fort Meade	Engine Rescue	5
11 West Lake Wales	Engine Rescue	4
12 Frostproof	Engine Rescue	4
13 Sun Air	Engine Brush (CS ¹)	3
14 Nalcrest	Engine	2
15 Mulberry	Engine	3
15 Mulberry EMS	Rescue	2
16 Auburndale	Medic (2)	4
17 Eagle Lake	Engine Rescue	5
18 Cypress Gardens	Ladder Rescue	5
19 Peace Creek	Engine	3
20 Loughman	Engine Tender (CS ¹)	3
21 Caloosa Lake	Squad Brush (CS ¹) Brush Tender (CS ¹)	3
22 Gibsonia	Rescue	2
23 Sleepy Hill	Engine Medic (Day Only)	3 2 – Day Medic Unit
26 Golfview	Engine Tender (CS ¹) Brush (CS ¹) Rescue	4
27 Indian Lake Estates	Engine Tender (CS ¹) Brush (CS ¹)	3
28 Highland City	Engine Brush (CS ¹) Rescue	5
29 Winter Haven	Medic (2)	4

Station	Units	Personnel
30 Haines City	Rescue Medic (Day Only)	2 2 – Day Medic Unit
31 South McKeel	Medic (2)	4
32 East Lime Street	Medic (2)	4
33 Northridge	Engine Tower (CS ¹) Rescue	5
34 South Florida Ave.	Medic (2)	4
35 Travis	Medic	2
36 Lake Alfred	Engine Rescue	5
37 Solivita	Ladder Rescue	5
	<i>Additional Engine and Rescue from Osceola County</i>	5
38 Cottonwood	Squad Rescue	5
39 Saddle Creek	Engine Rescue	5
40 Sand Hill	Tender Tender (CS ¹) Brush (CS ¹)	2
41 Davenport	Engine	2
	<i>Additional Engine and Brush (CS¹) from Davenport</i>	2
42 Four Corners	Engine Brush (CS ¹) Rescue	5
43 West Frostproof	Engine	2
44 Thompson Nursery	Engine	2
45 Dundee	Rescue	2
	<i>Additional Engine (2) Squad from Dundee</i>	1 – Day Only
46 Lake Marion Creek	Engine Rescue	5

¹ Cross Staffed

Utilization of Companies as Recommended in NFPA 1710

It takes an adequate and properly trained staff of emergency responders to put the appropriate emergency apparatus and equipment to best use in mitigating incidents. Insufficient staffing at an operational scene decreases the effectiveness of the response and increases the risk of injury to all individuals involved.

Tasks that must be performed at a fire can be broken down into two key components—life safety and fire flow. Life safety tasks are based on the number of building occupants and their location, status, and ability to take self-preservation action. Life safety related tasks involve search, rescue, and evacuation of victims. The fire flow component involves delivering sufficient water to extinguish the fire and create an environment within the building that allows entry by firefighters.

The number and types of tasks needing simultaneous action will dictate the minimum number of firefighters required to combat different types of fires. In the absence of adequate personnel to perform concurrent action, the Command Officer must prioritize the tasks and complete some in chronological order, rather than concurrently. These tasks include:

- Command
- Scene safety
- Search and rescue
- Fire attack
- Water supply
- Pump operations
- Ventilation
- Back-up /rapid intervention

The first 15 minutes from the first flaming combustion are the most crucial in the suppression of a fire. The timing of this 15-minute period does not start when the firefighters arrive at the scene but begins when the fire initially starts. How efficiently and effectively firefighters perform during this period has a significant impact on the overall outcome of the event. This general concept is applicable to fire, rescue, and medical situations. Critical tasks must be conducted in a timely manner in order to safely and effectively control a fire or to treat a patient. Polk County Fire Rescue is responsible for assuring that responding companies can perform all the described tasks in a prompt, efficient, and safe manner given their available resources.

Considerable ongoing local, regional, and national discussion and debate draws a strong focus and attention to the matter of firefighter staffing. Frequently, this discussion is set in the context of firefighter safety. NFPA 1710 specifies the number of firefighters assigned to a particular response apparatus, often characterized as a “minimum of four personnel per engine company.” ESCI notes that the more critical issue is the number of firefighters that are assigned at the scene of an incident in conjunction with the scope and magnitude of the job tasks expected of them, regardless of the type or number of vehicles upon which they arrive.

Setting the staffing levels is a determination that is made at the community level based on risk, capability, and citizen expectations and willingness to fund them. There are not mandated requirements that fit all situations, although NFPA 1710 has objectives to meet regarding the number of personnel required for some typical scenarios.

Some terms are used interchangeably, such as the assembly of firefighters on an incident, which may be called the Initial Full Alarm Assignment, Effective Firefighting Force" (EFF), or "Effective Response Force" (ERF). ESCI describes the NFPA 1710 recommended levels of this response force for three different, common emergency response scenarios faced by fire departments.

Figure 22: Initial Full Alarm Assignment for Residential Structure Fire

Initial Full Alarm Assignment 2,000 SF Residential Structure Fire	
Incident Commander	1
Water Supply Operator	1
2 Application Hose Lines	4
1 Support Member per Line	2
Victim Search and Rescue Team	2
Ground Ladder Deployment	2
Aerial Device Operator	1
Incident Rapid Intervention Crew (2 FF)	2
Total	15

This is a single-family residential structure of 2,000 square feet which has up to two-stories without a basement and exposures. The following figure describes an initial full alarm assignment for an open-air strip type shopping center.

Figure 23: Initial Full Alarm Assignment for a Strip Shopping Center

Initial Full Alarm Assignment Open Air Strip Shopping Center (13,000 to 196,000 SF)	
Incident Commander	1
Water Supply Operators	2
3 Application Hose Lines	6
1 Support Member per Line	3
Victim Search and Rescue Team	4
Ground Ladder Deployment	4
Aerial Device Operator	1
Rapid Intervention Crew (4 FF)	4
EMS Care	2
Total	27

The following is an initial full alarm assignment for a three-story apartment building with a single 1,200 square foot apartment fire.

Figure 24: Initial Full Alarm Assignment in a Three-Story Apartment Building

Initial Full Alarm Assignment 1,200 SF Apartment (3-Story Garden Apartment)	
Incident Commander	2
Water Supply Operators	2
3 Application Hose Lines	6
1 Support member per line	3
Victim Search and Rescue team	4
Ground Ladder Deployment	4
Aerial Device Operator	1
Rapid Intervention Crew (4 FF)	4
EMS Care (1 Crew)	2
Total	28

These are generalizations that are representative of different types of structures and risks. Each department may handle these types of fires with fewer or more personnel, however, this describes the work functions that must take place for effective and safe handling of a fire. Many fireground operations must occur simultaneously or very close to simultaneously rather than sequentially in order to safely and effectively mitigate the incident.

When a fire escalates beyond what can be handled by the initial assignment, or the fire has unusual characteristics such as a wind-driven fire, or has been accelerated with a highly flammable compound, additional personnel will be needed. There are also types of scenarios that may not be fires, but mass casualty incidents, explosions, tornadoes, etc., that may need additional staffing. It is difficult or impossible to staff for these worst-case incidents. These require a strong mutual aid or automatic aid plan for assistance.

The next figure depicts the deployment of PCFR to various types of structure fires as listed in the emergency fire dispatch (EFD) response matrix.

Figure 25: PCFR Deployment for Structure Fires

Call Type	Description	Amb.	Eng.	B/C	H/R	Sq.	Lad	Staff ¹
69	Structure Fire	1	3	2	—	—	—	13
69E02	High Rise	1	3	2	1	1	1	22
69E02T	Trapped High Rise	1	4	2	1	1	1	25
69E03	Commercial/Industrial	1	3	1	1	1	1	21
69E03T	Trapped Commercial/Industrial	1	4	2	1	1	1	25
69E05	Residential (Multiple)	1	3	1	1	1	1	21
69E05T	Trapped Residential (Multiple)	1	4	1	1	1	1	24
69E06	Residential (Single)	1	3	1	1	1	—	18
69E06T	Trapped Residential (Single)	1	4	1	1	1	—	21

¹ Staff is based on the following: Amb. = 2, Eng. = 3, B/C = 1, H/R = 3, Sq. = 3, Lad = 3

PCFR has identified critical staffing based on the services provided and the various types of incidents they face. The next figure illustrates these incidents and the associated staffing determined by PCFR.

Figure 26: PCFR Critical Staffing for Various Type Incidents

STRUCTURE FIRE (HYDRANTED) TASKS		STRUCTURE FIRE (NON-HYDRANTED) TASKS	
Command	1	Command	1
Safety	1	Safety	1
Pump Operations	1	Pump Operations	1
Attack Line	2	Attack Line	2
Back-up Line	2	Back-up Line	2
Search and Rescue	2	Search and Rescue	2
Ventilation	2	Ventilation	2
RIT	2	RIT	2
Other (hydrant)	1+	Water Tender Operator	1+
Total:	14+	Total:	14+

WILDLAND FIRE: HIGH RISK		WILDLAND FIRE: LOW RISK	
Command	1	Command	1
Safety	1	Safety	1
Pump Operations/Lookout	1	Pump Operations/Lookout	1
Attack Line	1	Attack Line	1
Exposure Lines	1	Exposure Lines	1
Structure Protection	2	Structure Protection	2
Water Supply	1	Water Tender Operator	1
Total:	8	Total:	8

HAZARDOUS MATERIALS: HIGH RISK		HAZARDOUS MATERIALS: LOW RISK	
Command/Safety	1	Command	1
Liaison	1	Liaison	1
Decontamination	2	Decontamination	2
Research/Support	2	Research/Support	2
Entry team, and backup team	4	Entry team, and backup team	0
Total:	10	Total:	6

EMERGENCY MEDICAL SERVICES	
Patient Management	2
Patient Care	1
Documentation	1
Total:	4

MAJOR MEDICAL RESPONSE	
Incident Command	1
Safety	1
Triage	1
Treatment Manager	1
Patient Care	6+
Transportation Manager	1
Documentation	1
Total:	12+

MOTOR VEHICLE COLLISION: NO ENTRAPMENT	
Scene Management/ Documentation	2
Patient Care/Extrication	3
Total:	5

MOTOR VEHICLE COLLISION: WITH ENTRAPMENT	
Command	1
Safety	1
Scene Management	2
Patient Care	2
Extrication	2
Pump Operator/ Suppression Line	2
Extrication/ Vehicle Stabilization	1-2
Total:	11-12

TECHNICAL RESCUE: WATER	
Command/Safety	1
Rescue Team	2
Backup Team	2
Patient Care	2
Total:	7

TECHNICAL RESCUE: CONFINED SPACE	
Command	1
Safety	1
Rescue Team	2
Backup Team	2
Patient Care	2
Rope Tender	1
Total:	9

TECHNICAL RESCUE: ROPE	
Command/Safety	1
Rescue Team	2
Backup Team	2
Patient Care	2
Rope Tender	2
Total:	9

TECHNICAL RESCUE: TRENCH RESCUE	
Command/Safety	1
Rescue Team	2
Rescue Team	2
Backup/support team	2
Patient Care (combined w/Rescue Team)	
Shoring	2
Total:	9

AIRCRAFT EMERGENCY	
Command/Safety	1
Aircraft Fire Suppression	0
Pump Operations	1
Attack Line	2
Back-up Line	0
Rescue	2
Emergency Medical Care	0
Water Supply	1
Total:	7

Responsibilities and Activity Levels of Personnel

Fire Rescue

In every fire department, there exist several activities that must be accomplished that are outside of the "regular" duties of responding to emergency incidents. These typically involve general maintenance of self-contained breathing apparatus (SCBA), hose testing, air monitor calibration, EMS, quality assurance, and various committees. Polk County Fire Rescue relies on contracted services to handle hose testing, ladder testing, and SCBA certifications. Polk County Fire Rescue does use individuals who have an interest in these additional areas to accomplish other department programs and tasks. In addition to the benefit of completing these tasks, the additional responsibilities serve to further develop knowledge, skills, and abilities of participating individuals. These individuals learn project management, time management, and budgeting skills that prepare them for future promotional opportunities.

SERVICE DELIVERY AND PERFORMANCE

Service delivery is the foundation of any service-oriented organization. Without an understanding of how services are organized, deployed and managed, efficiency and effectiveness cannot be quantified. This section of the report analyzes multiple facets of the current delivery of fire services for PCFR, including the identification of incidents by type and frequency, population demographics, deployment analysis, system reliability, and a summary of performance. By understanding current performance and how the system functions, goals and objectives for future performance improvements can be established and implemented.

Data Sources

Response data was provided from the department's Record Management System (RMS). The RMS data was obtained from PCFR and was provided for the period January 1, 2015–December 31, 2018. Fifty-eight fields of data were included for each record. A total of 634,144 records were included for the time period.

As the RMS records capture every unit that responds to an incident and therefore may have multiple entries for any given incident—single incident records had to be extracted. This was completed by pulling the best performance in each time category and then removing duplicates. After calculations and duplicate removal, there were 362,205 single unit records left for analysis.

The next figure summarizes the records that were provided and the totals for each year.

Figure 27: PCFR RMS Summary 2015–2018

Year	All Records	Single Incident
2015	136,481	82,713
2016	158,417	89,137
2017	169,219	94,936
2018	170,027	95,419
Total	634,144	362,205

Both single records and all record data sets were used for the following analysis, depending on the dataset that was most applicable for the desired measurement. The average annual increase in service demand between the years for which information was provided was 4.9 percent (7.7 percent increase for 15–16, 6.5 percent increase for 16–17, and 0.5 percent increase for 17–18).

Additionally, ESCI was provided CAD data for the period 2017–2018 that allowed for an analysis of the pre-alert (CAD alert) that is sent to selected PCFR pagers prior to full completion of the dispatch process for all units responding to any given call. PCFR provides direction to the PSCO ECC as to what units will get the pre-alert page. In each case, the first due station is included in this pre-alert page. These records totaled 47,587 single incident records. Included were 23,871 from 2017, and 23,716 from 2018. These records were used in the call processing performance section. It is important to note that the PCFR RMS system uses the dispatch completion time (all units dispatched) rather than the pre-alert time for the call processing segment of response time.

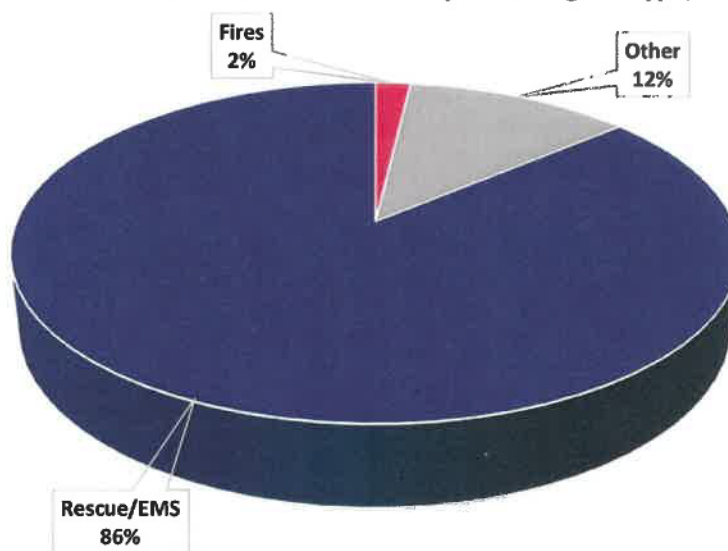
Service Demand

In the demand study, ESCI reviewed current and historical service demand by incident type and temporal variation for the department. The RMS data provided by PCFR was used to illustrate call types and the increase in volume from 2015–2018. The following figure depicts historical service demand from 2015 through 2018 based on NFIRS incident type.

Demand by Incident Type

It is important to track types of incidents from a percentage standpoint as it highlights where resources are utilized the most. This may assist in determining personnel and equipment needs, as well as areas for training.

Figure 28: PCFR Historical Service Demand by Percentage of Type, 2015–2018



As this figure indicates, most of the service demand is EMS related, which is a common scenario for departments across the country. However, it does highlight the need to ensure personnel continually train in firefighting operations to prevent the erosion of skills needed for fire suppression. This may include increasing in-service training, multiple company training and drills, tabletop exercises, etc. Incidents in the “other” category include, among others, service calls, good intent, false alarms, weather, and special incidents.

Figure 29: PCFR Historical Service Demand by Type, 2015–2018

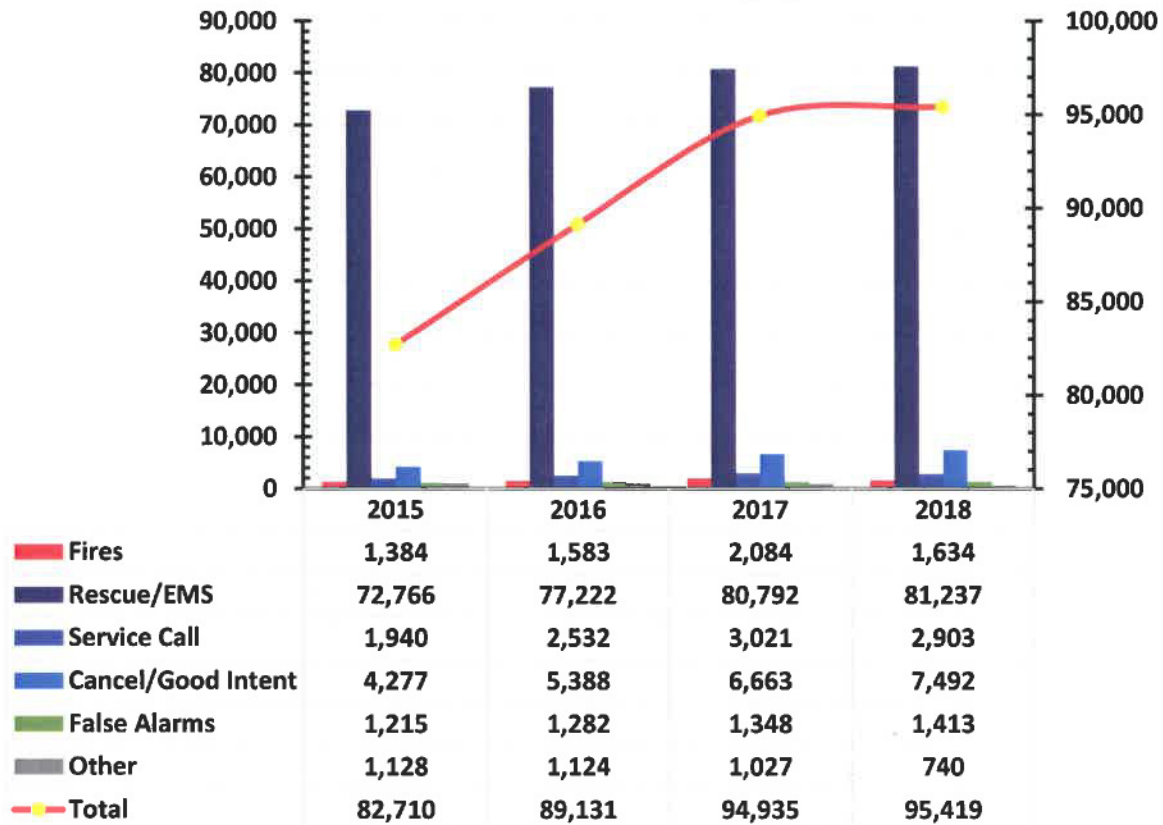
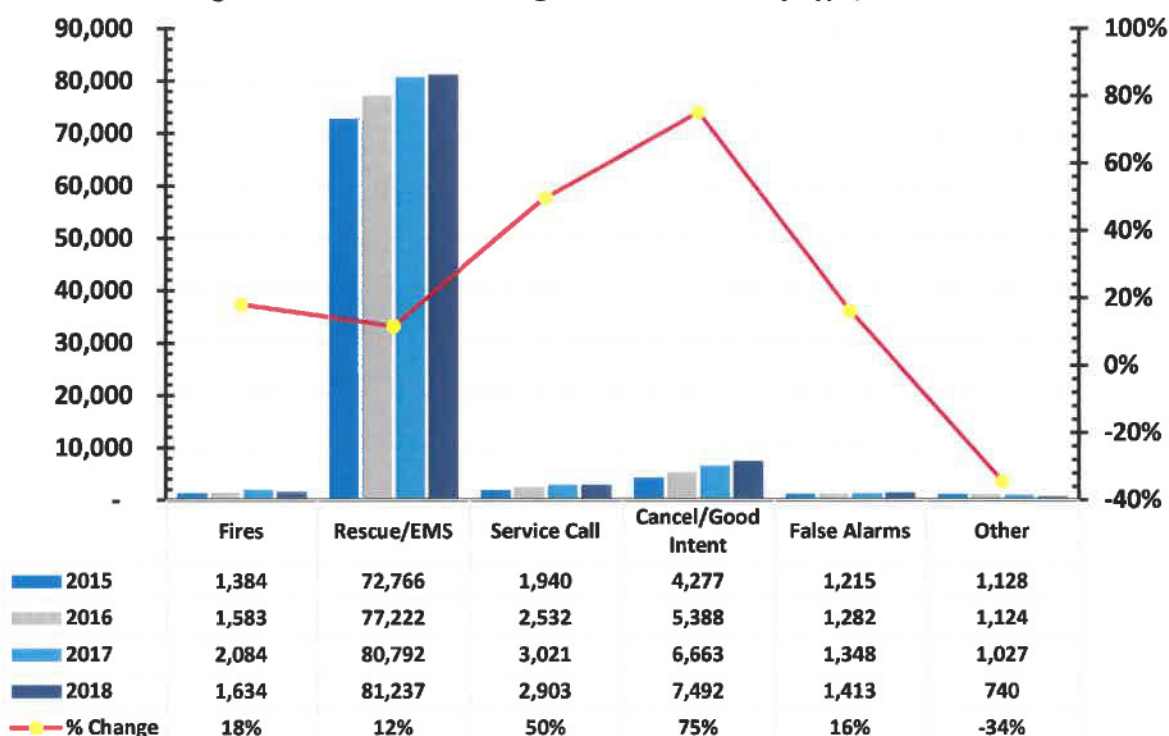


Figure 29 also indicates the huge disparity between EMS calls vs. all other types of incidents. From 2015 to 2018, the total number of calls increased by 13.3 percent, which places additional demands on existing resources. Adding additional equipment and personnel to address service demand increases may not always be feasible due to budgetary constraints, however, there could be other approaches to consider, such as reduction in false alarms via aggressive fire prevention/inspection efforts, analyzing high volume EMS callers and addressing their particular needs, or utilizing existing personnel to develop a community paramedicine program. Calls in the “other” category include overpressure/rupture, hazardous conditions, weather, and special incidents.

Although there was an increase in overall incidents from 2017–2018, the increase is less than in previous years. It appears that two factors contributed to this—during April and May of 2017 there were 575 fires which is 277 more than the average for April and May 2015, 2016, and 2017. The additional fires can be brush and other outside rubbish, trash, and waste. Additionally, another outlier would be the Hurricane Irma event. In September 2017, this event created many concurrent calls. September’s average not including 2017 was 7,213 incidents. There were 8,708 in September 2017, nearly 1,500 above the average.

Figure 30: PCFR Percent Change Service Demand by Type, 2015–2018



As clearly indicated in Figure 30, service calls and cancel/good intent incidents had the largest increases over the four-year timeframe. All other call types had double digit increases except for incidents in the “other” category, which experienced a significant decrease. These calls include overpressure/rupture, hazardous conditions, weather, and special incidents.

Temporal Variation in Demand

A temporal analysis of incidents reveals when the greatest response demand occurred. The following figures show how activity and demand changes for PCFR based on various time measurements. The data used is the 2015–2018 RMS data provided, and the results are based on the total incidents.

Figure 31: PCFR Service Demand by Month, 2015–2018

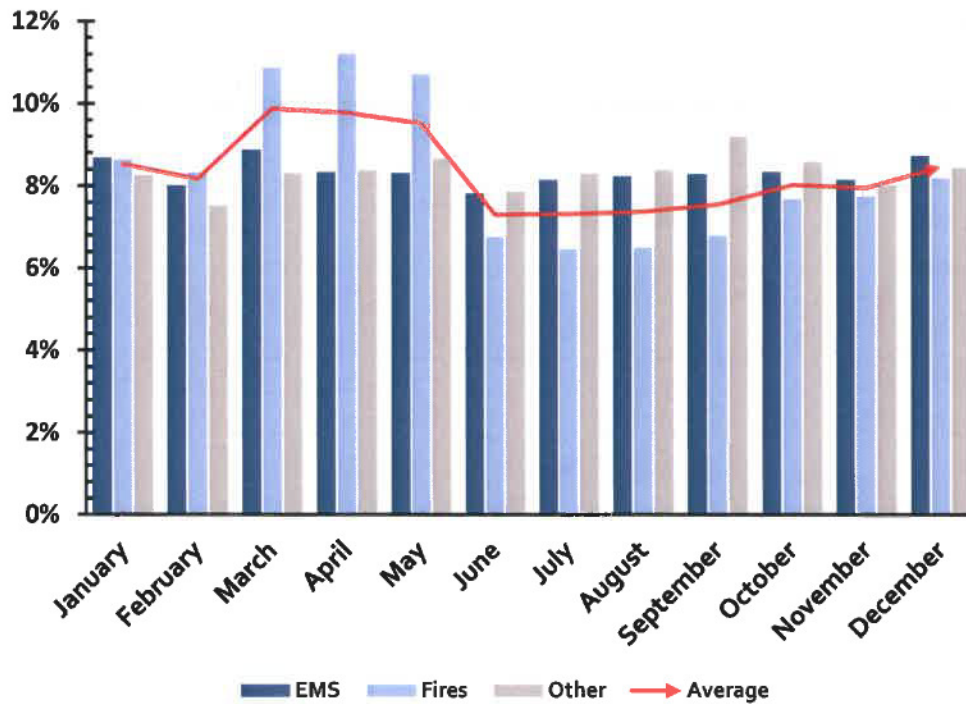
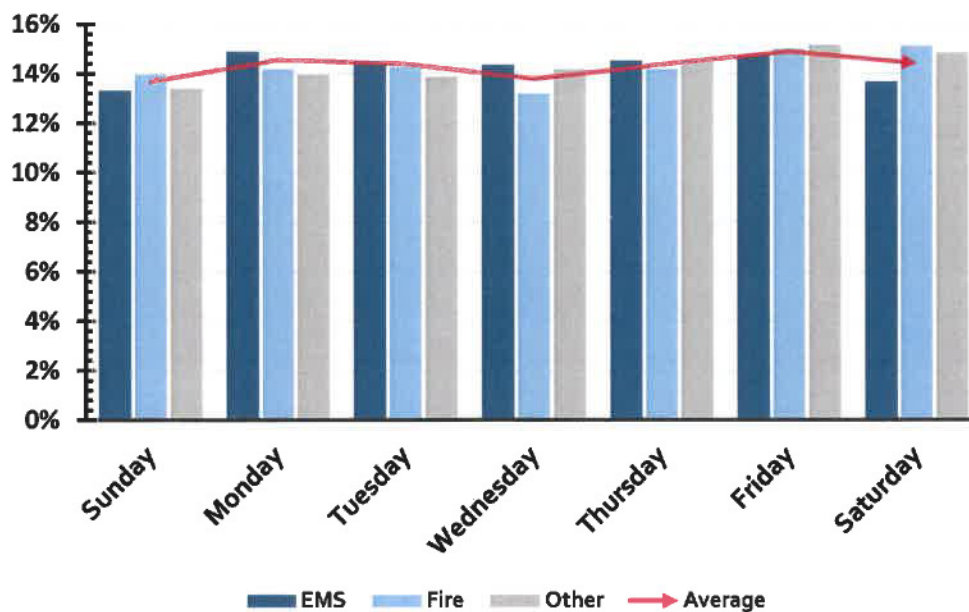


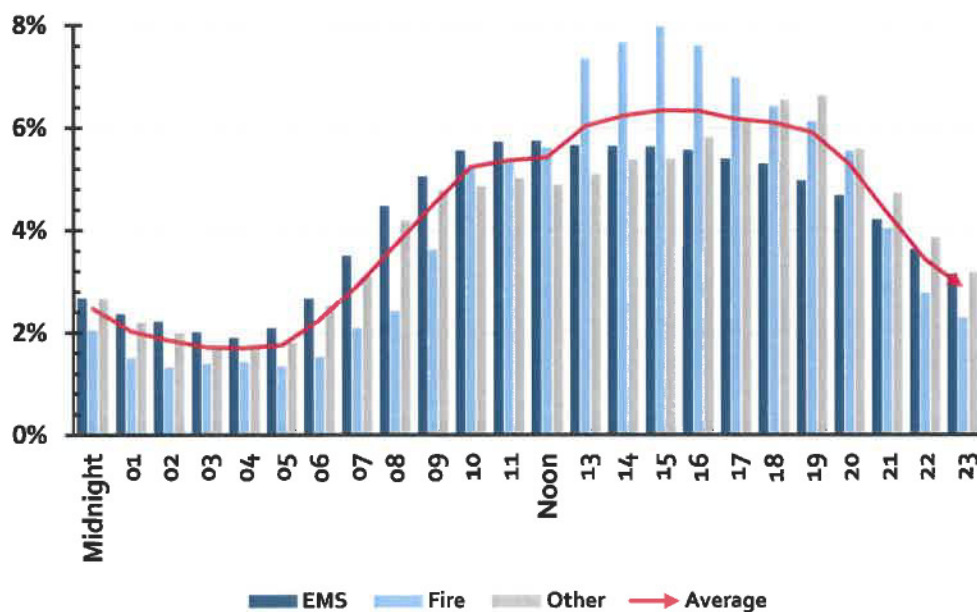
Figure 31 measures total calls from 2015–2018. Service demand is relatively consistent throughout the time period indicated, except for March through May for fire calls, which exceeded the average of total calls during those months. EMS incidents are below the average of total calls February through May, with above average demand during the summer months. Calls in the “other” category were above average during the summer to early fall timeframe (June to October). These calls would include, among others, overpressure/rupture, hazardous conditions, good intent, and service calls.

Figure 32: PCFR Service Demand by Day of the Week, 2015–2018



Service demand is very consistent across the week. While Sunday is the “slowest” day of the week, the difference is negligible as compared to the remaining days. Thursday, Friday, and Monday are the busiest days for EMS calls, while fire calls see a slight increase in demand on Friday and Saturday. Calls in the “other” category increase on Friday and Saturday, and they include overpressure/rupture, hazardous conditions, services calls, good intent, false alarms, weather, and special incidents.

Figure 33: PCFR Service Demand by Hour of the Day, 2015–2018



Based on data collected for the previous figure, fire calls experienced the highest volume between the hours of 1:00 PM to 5:00 PM with very low incidences of fire during the overnight hours (1:00 AM to 5:00 AM). EMS calls began to increase around 7:00 AM and remained fairly consistent throughout the day until late evening. Calls in the "other" category followed a similar pattern of increasing during daylight hours, however, calls increased above the average for the day between 6:00 PM and 10:00 PM.

Figure 34: Busiest Consecutive Average Service Demand Periods, 2015–2018

Service Type	8-Hour	10-Hour	12-Hour
Average Demand	11:00 AM–7:00 PM	11:00 AM–9:00 PM	09:00 AM–09:00 PM
Percent of Total¹	48%	59%	69%

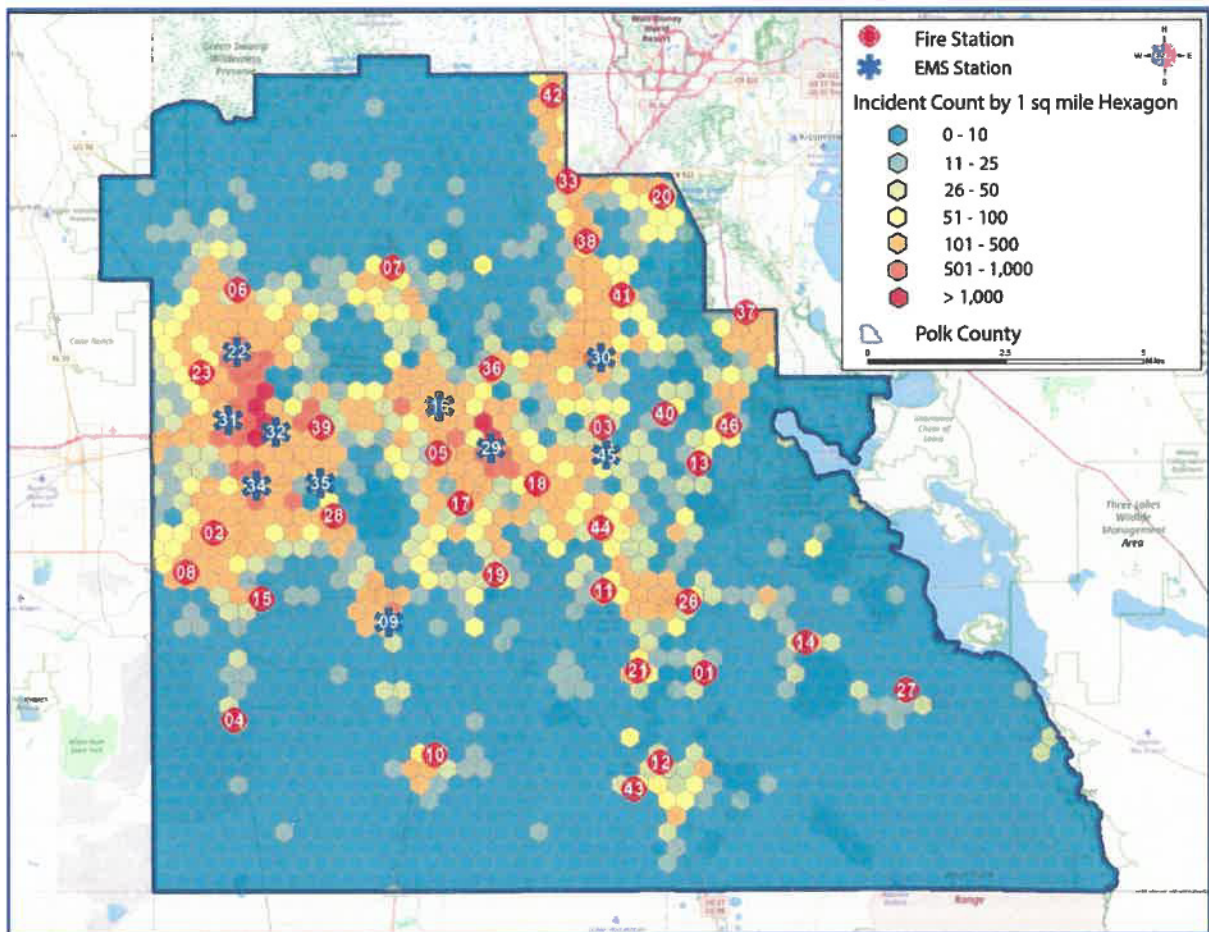
¹Percent of the total of all service-types for a 24-hour period

Figure 34 shows various time segments of the day with the 12-hour timeframe having the largest percentage of total calls for a 24-hour period. This of course is in line with the previous figure for all call types. This information could be helpful if PCFR were to consider any deployment modifications such as utilization of peak EMS units, etc., to address service demand increases during those times.

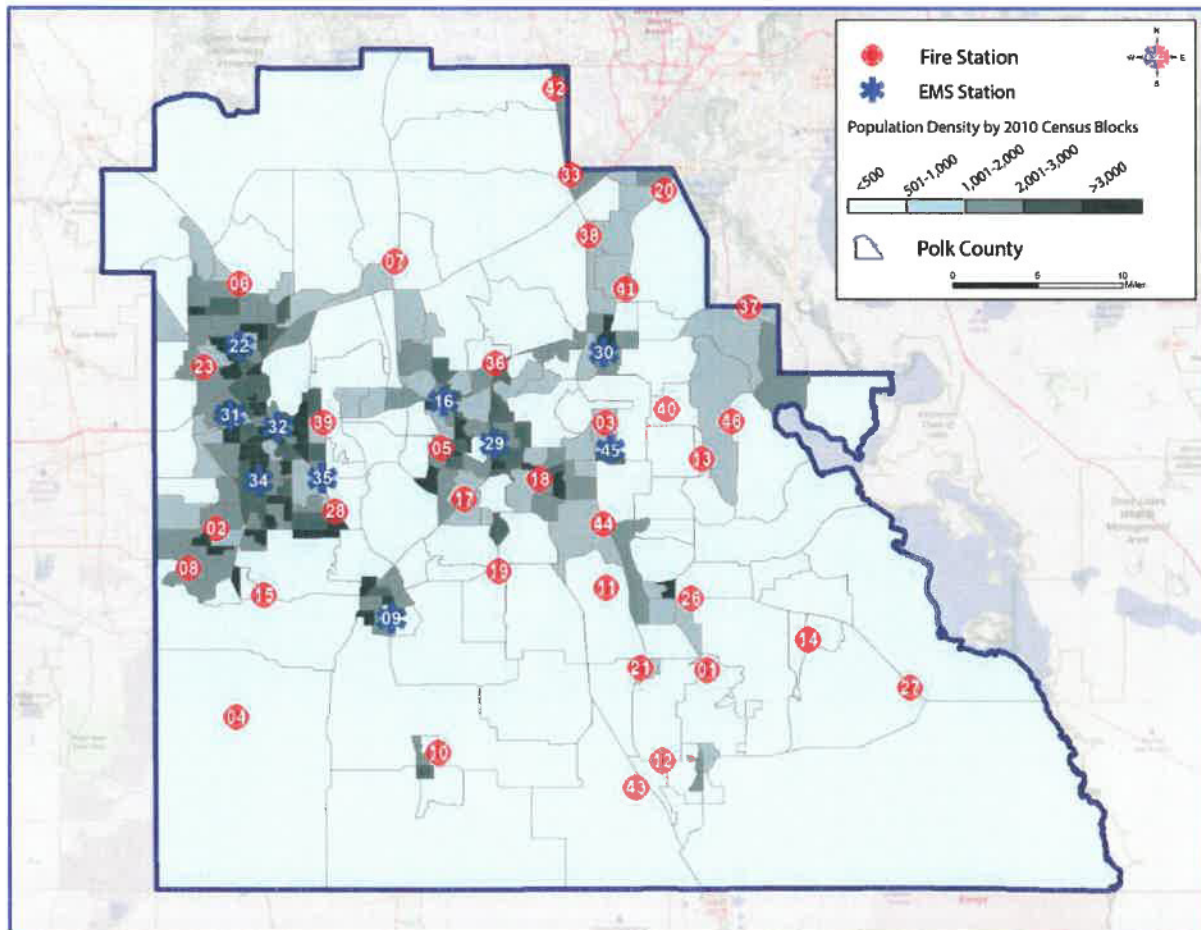
Geographic Service Demand

In addition to the temporal analysis, it is useful to examine the geographic distribution of service demand. Utilizing the PCFR RMS data, ESCI calculates the mathematical density of incidents during the period 2015–2018 throughout the County area. The next figure shows the result of this calculation.

Figure 35: PCFR Geographic Service Demand 2018



Service demand is spread throughout the County area with various areas of high demand. These high incident density areas tend to mirror the areas of higher population. For review, the next figure shows the population density of the County.

Figure 36: Polk County Population Density

As expected, the areas with the highest population density correspond with the areas of highest incident density displayed in the previous figure.

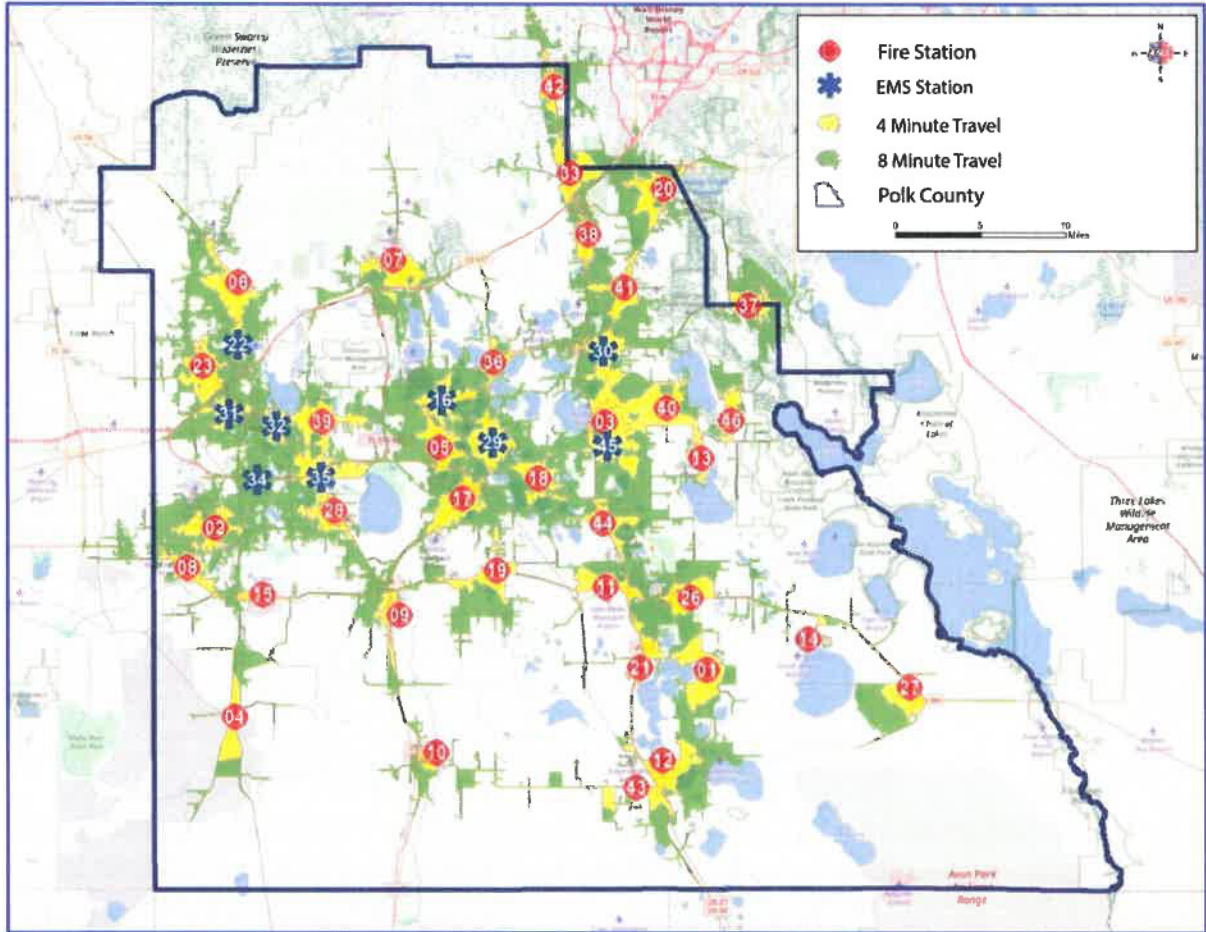
Resource Distribution Study

The County encompasses 2,011 total square miles of which 1,798 is land area. Because the cities listed in the next figure provide their own fire protection, the area for PCFR primary fire protection responsibility is 1,586 square miles. The service to this area is provided from 34 career staffed fire stations.

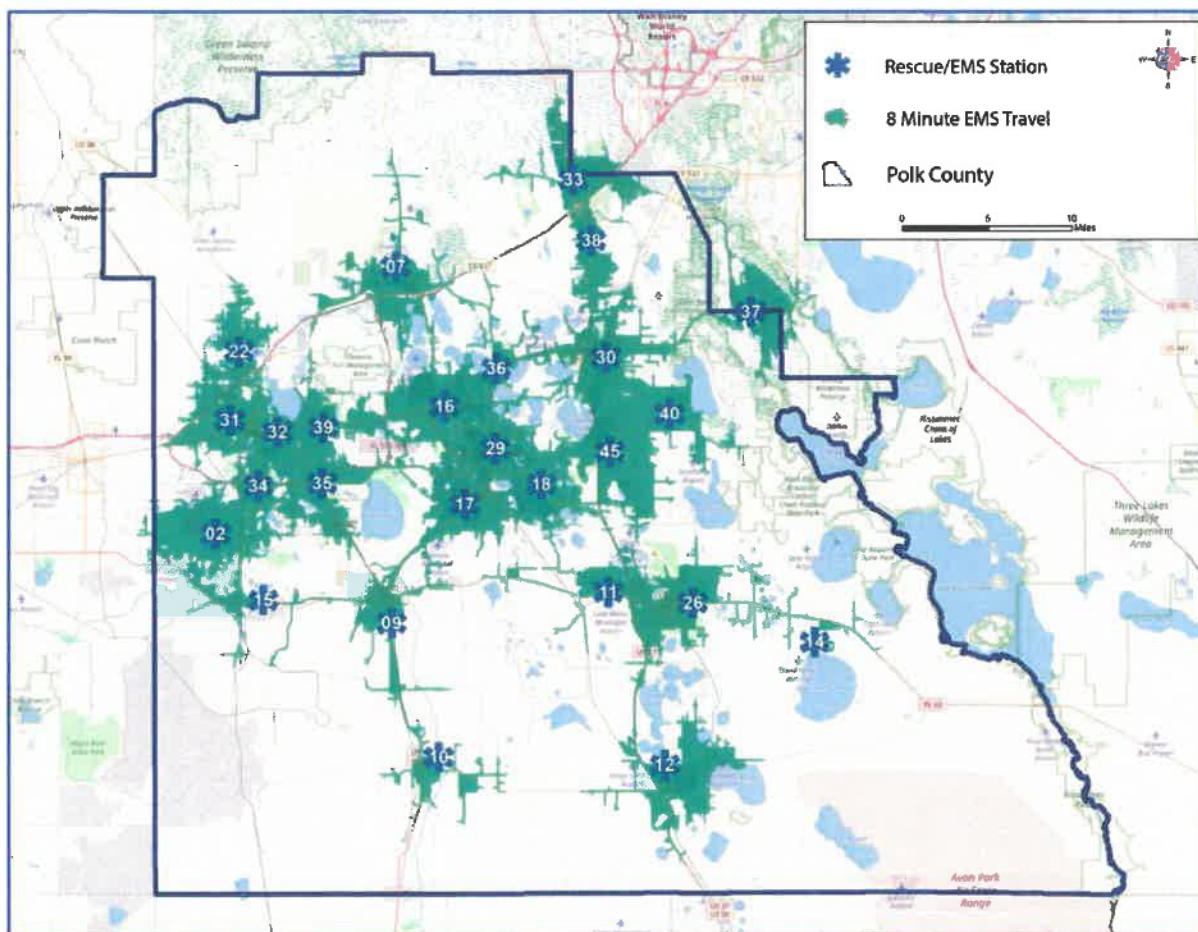
Figure 37: PCFR Fire Coverage Area Summary

Jurisdiction	Fire Protection Service Area Sq. Miles Land Area
PCFR	1,586
Auburndale	13
Bartow	46
Davenport	2
Dundee	4
Fort Meade	5
Haines City	18
Lake Alfred	9
Lake Wales	19
Lakeland	65
Winter Haven	31
Total	1,798

Benchmark response goals for fire and EMS responses can be found in NFPA 1710. For fires the target is based on the first fire suppression unit arriving on a fire scene within a four minutes travel time. NFPA 1710 requires the arrival of the balance of the initial dispatch or effective response force (ERF) within an eight-minute travel time. The geography and nature of the road network presents challenges to PCFR. As illustrated in the next figure, there are many areas of the County which are well outside of the four- and eight-minute NFPA 1710 target travel time. These are generally in areas of lower population and incident density.

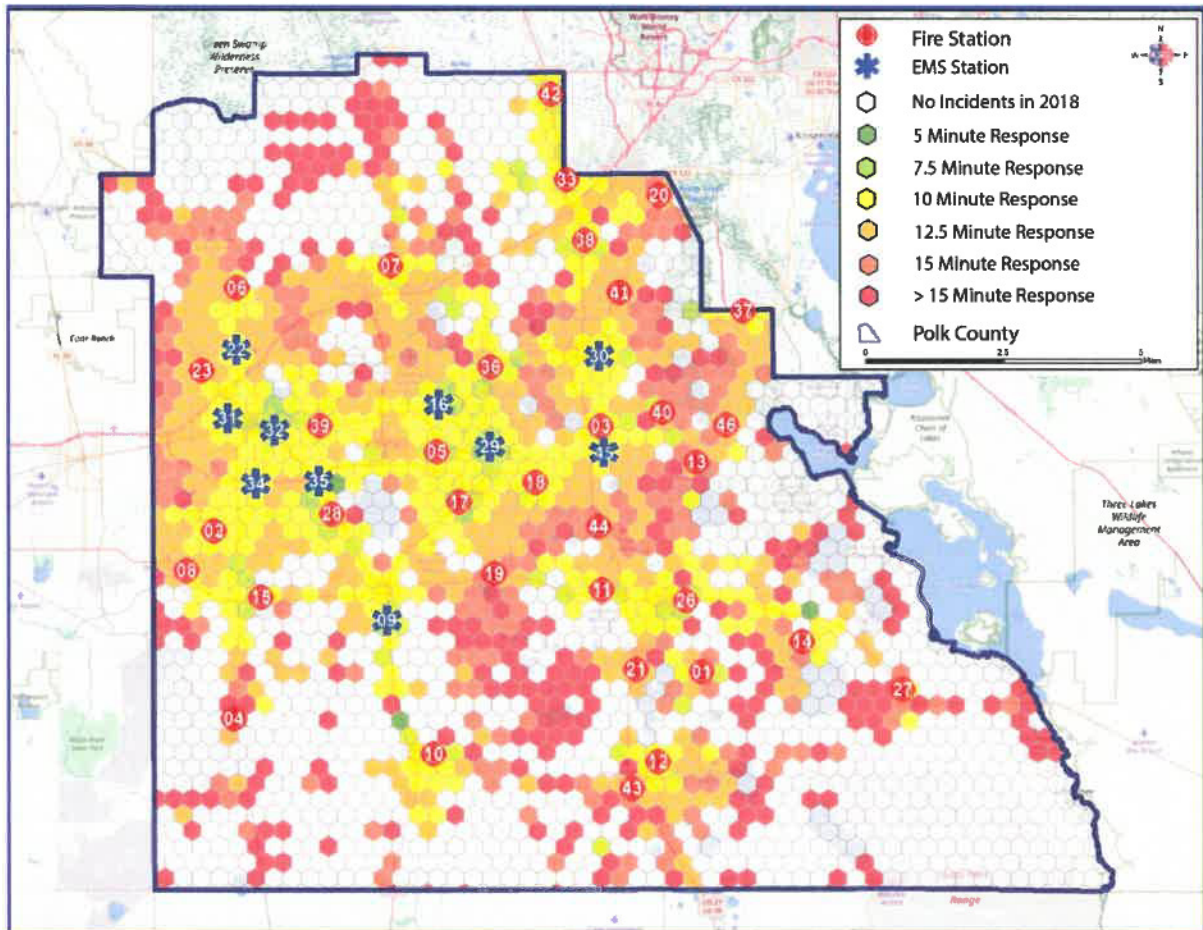
Figure 38: Predicted PCFR Travel Time from Fire Station Locations

The entire 1,798 square miles of land area is served by PCFR for EMS response. Resources, whether transport units or first response fire suppression units, are deployed from the 34 fire stations and 10 EMS-only stations. For EMS, the NFPA 1710 target is based on the arrival of a unit with an EMS-certified first responder with automatic external defibrillator (AED) or higher-level capability within four minutes travel time. NFPA 1710 requires arrival of an advanced life support (ALS) unit at an emergency medical incident within an eight-minute travel time, where this service is provided by the fire department. As illustrated in the next figure, there are many areas of the County well outside of the eight-minute target travel time for an ALS unit. These, again, are generally in areas of lower population and incident density.

Figure 39: Predicted PCFR Travel Time from EMS Stations Locations

While the two previous illustrations show predicted travel times, this analysis assumes that all units are in the station and waiting to respond (not realistic). The next figure is based on actual performance for incidents in 2018 with the hexagons depicting a one square mile area.

Figure 40: Actual PCFR Rescue Time from all Stations, 2018



Resource Concentration Study

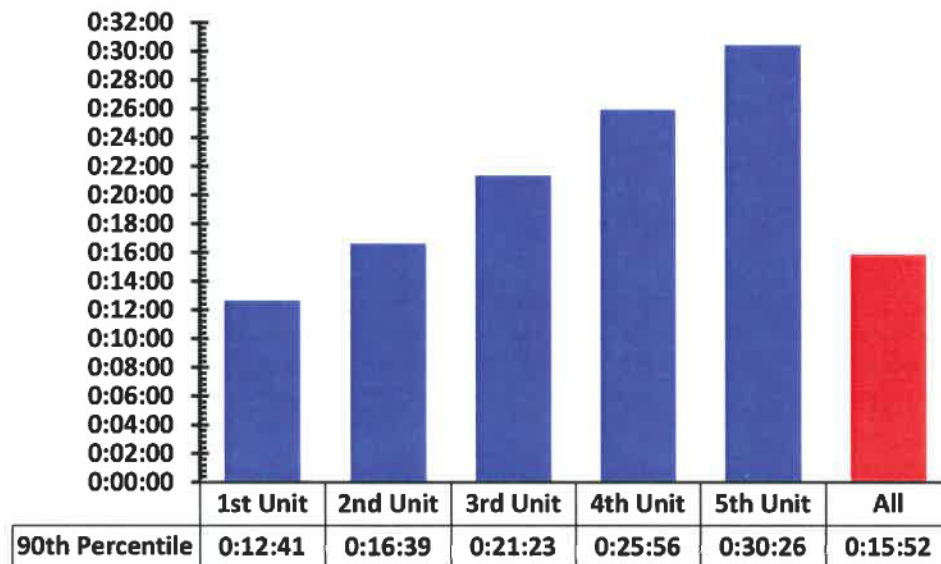
Effective Response Force

Standard firefighting procedures call for the arrival of the entire initial assignment (sufficient apparatus and personnel to effectively deal with an emergency based on its level of risk, referred to as Effective Response Force) within a specified amount of time. This is to ensure that enough people and equipment arrive soon enough to safely control a fire or mitigate any emergency before there is substantial damage or injury. In this analysis, ESCI examines PCFR's ability to assemble multiple resources across the county in a timely manner.

Response performance for the order of arrival of the first five units arriving to structure fires was analyzed for incidents occurring between 2015 and 2018 using RMS data. For this analysis, only fires with an initial NFIRS coding of building or structure fire listed in the RMS data were included. Additionally, only fire suppression units were used—Command Officers and supplemental units were not included—the single certified staffed rescues were also excluded.

To be measured, the unit had to have an on-scene timestamp. The measurement used was the response time—turnout plus travel meaning the time from the verbal dispatch (not the pre-alert as discussed earlier and captured in the CAD data but not the RMS data) until arrival on scene.

There are several rural and remote areas within the County that lie outside of a predicted eight-minute travel window from a fire station. Furthermore, even if the first arriving engine company can reach a remote location in a timely manner, the ability to assemble enough firefighters on scene within a timeframe conducive to saving property is limited as many units may need to travel as much as 30 minutes to reach the location. The next figure provides actual PCFR performance for the assembly of an effective response force for the period 2015 through 2018. With each engine and squad company staffed with three firefighters, and the rescue with two the expectation in rural or remote areas to assemble 14 firefighters will be just over 30 minutes.

Figure 41: Effective Response Force, 2015–2018

The performance illustrated in Figure 41 was calculated at the 90th percentile as recommended in NFPA 1710. The first unit arrived within 12 minutes, 41 seconds after notification. The fifth unit arrived at 30 minutes, 26 seconds. The overall performance for structural fires in the study area was 15 minutes, 52 seconds.

Response Reliability

The workload of emergency response units can be a factor in response time performance. Concurrent incidents, or the amount of time individual units are committed to an incident, can affect a jurisdiction's ability to muster enough resources to respond to additional emergencies.

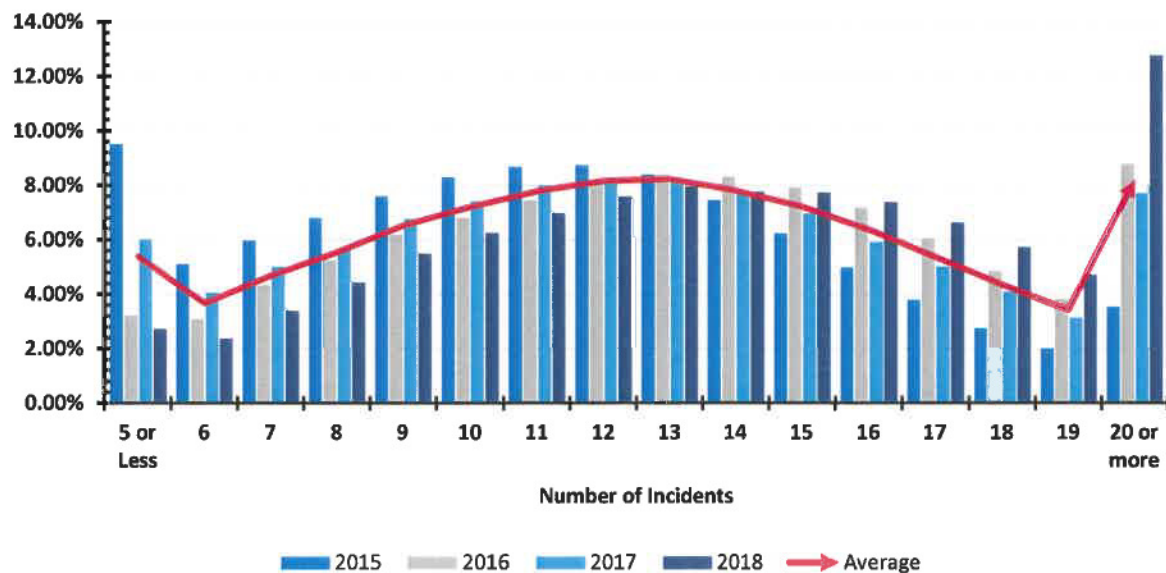
Call Concurrency

In the following figure, ESCI examines PCFR incidents from 2015 through 2018 to find the frequency with which the department is handling multiple, concurrent calls. This is important because the more calls occurring at one time, the more stretched available resources become, leading to extended response times from more distant responding available apparatus.

Figure 42: PCFR Concurrent Incidents, 2015–2018

Number of Incidents	2015	2016	2017	2018
Five Incidents or less	9.52%	3.24%	6.03%	2.74%
Six Incidents	5.12%	3.10%	4.08%	2.38%
Seven Incidents	5.99%	4.35%	5.03%	3.40%
Eight Incidents	6.82%	5.27%	5.67%	4.45%
Nine Incidents	7.62%	6.21%	6.78%	5.49%
Ten Incidents	8.30%	6.82%	7.43%	6.26%
Eleven Incidents	8.68%	7.46%	8.01%	6.97%
Twelve Incidents	8.75%	8.11%	8.22%	7.59%
Thirteen Incidents	8.39%	8.41%	8.15%	7.96%
Fourteen Incidents	7.46%	8.32%	7.69%	7.77%
Fifteen Incidents	6.24%	7.94%	6.98%	7.74%
Sixteen Incidents	5.00%	7.20%	5.93%	7.39%
Seventeen Incidents	3.80%	6.07%	5.03%	6.64%
Eighteen Incidents	2.76%	4.85%	4.10%	5.74%
Nineteen Incidents	2.01%	3.84%	3.15%	4.72%
Twenty Incidents or more	3.55%	8.81%	7.72%	12.78%

Figure 43: Graphical Illustration PCFR Concurrent Incidents, 2015–2018



Concurrent calls within the 9–16 incident range, shown in Figure 43, remained relatively constant over the four-year timeframe with a slight shift of increasing concurrency from 2015 to 2018. As previously stated, any amount of concurrent calls can place a strain on the entire system, resulting in increased response times. In 2018, the number of times where 20 or more calls were occurring simultaneously increased to more than 12 percent. Again, another outlier would be the Hurricane Irma event. In September 2017, this event created many concurrent calls. An average number of concurrent calls in September, not including 2017, was 7,213 incidents. There were 8,708 in September 2017, nearly 1,500 above the average.

Unit Hour Utilization

Unit Hour Utilization (UHU) describes the amount of time that a unit is not available for response because it is already committed to another incident. The larger the number, the greater its utilization and the less available it is for assignment to subsequent calls for service. UHU rates are expressed as a percentage of the total hours in a year. The following figures display the amount of time response units were committed to an incident in 2015–2018 according to the RMS data provided. Although all units in the data set were analyzed, only those with a UHU of 10 percent or greater are included in the following figure. Additionally, the units that responded to the Rockridge Road fire (those units in the rows labeled “Units in the Study”) are included for comparison.

Figure 44: Unit Utilization by Unit for Over 10%, 2015–2018¹ from CAD Data

Type of Unit	Unit	Total Incidents	Total Time	Average Time	UHU
Rescue/Medic	MR022	16,567	13666:11:53	0:49:30	39.0%
	MD032	16,696	12848:52:24	0:46:10	36.6%
	MD031	16,010	12376:36:12	0:46:23	35.3%
	MD232	13,173	9729:12:10	0:44:19	34.0%
	MD029	15,547	11905:06:38	0:45:57	34.0%
	MR006	6,019	5002:15:37	0:49:52	33.0%
	MD229	12,311	9379:22:00	0:45:43	32.8%
	MR039	13,846	10887:35:56	0:47:11	31.1%
	MR030	13,165	10884:46:12	0:49:36	31.0%
	MR018	12,298	10630:04:22	0:51:52	30.3%
	MD231	13,499	10533:42:30	0:46:49	30.0%
	MR002	10,748	10040:26:58	0:56:03	28.6%
	MD016	11,601	9917:27:53	0:51:18	28.3%
	MD035	11,024	9837:04:46	0:53:32	28.1%
	MR005	11,719	9587:47:58	0:49:05	27.3%
	MR017	10,562	9041:08:05	0:51:22	25.8%
	MD234	5,245	4487:49:25	0:51:20	25.7%
	MR045	8,273	7317:21:54	0:53:04	25.6%
	MR026	10,291	8932:17:26	0:52:05	25.5%
	MR033	8,189	6889:35:30	0:50:29	24.1%
	MR011	7,848	6657:58:41	0:50:54	23.3%
	MR038	10,066	7964:14:17	0:47:28	22.7%
	MR036	9,112	7504:54:58	0:49:25	21.4%
	MR009	8,764	7215:14:15	0:49:24	20.6%
	MR015	7,753	6999:30:37	0:54:10	20.0%
	MR007	7,978	6677:07:23	0:50:13	19.0%
	MR037	7,571	5856:45:51	0:46:25	16.7%
	MD216	5,952	5057:51:18	0:50:59	14.4%
	MR042	1,523	1212:28:48	0:47:46	14.2%
	MR040	5,582	4928:43:04	0:52:59	14.1%
	MR046	535	464:53:16	0:52:08	13.5%
	MR012	4,800	4420:29:21	0:55:15	12.6%
	MR010	4,634	4309:15:35	0:55:48	12.3%
	MR014	4,102	4308:29:39	1:03:01	12.3%
Engines	EN039	17,759	5670:16:31	0:19:09	16.2%
	EN006	12,045	4702:38:39	0:23:26	13.4%
	EN002	12,017	4219:22:27	0:21:04	12.0%
	EN005	12,612	4019:06:10	0:19:07	11.5%
	EN023	9,143	3535:51:21	0:23:12	10.1%

Type of Unit	Unit	Total Incidents	Total Time	Average Time	UHU
Units in the Study	EN006	12,045	4702:38:39	0:23:26	13.4%
	BC003	9,038	2559:10:13	0:16:59	7.3%
	MR006	6,019	5002:15:37	0:49:52	33.0%
	BC001	6,794	2037:25:23	0:18:00	5.8%
	SQ007	7,056	2844:28:20	0:24:11	8.1%
	EN039	17,759	5670:16:31	0:19:09	16.2%
	EN023	9,143	3535:51:21	0:23:12	10.1%
	TE039	234	253:07:44	1:04:54	0.7%
	TE004	27	49:04:55	1:49:04	0.1%
	BR023	536	291:22:52	0:32:37	0.8%
	AT019	239	435:57:24	1:49:27	1.2%
	MD231	13,499	10533:42:30	0:46:49	30.0%
	FC506	17	7:35:45	0:26:49	< 0.1%
	TE015	974	569:04:43	0:35:03	1.6%

³Not all units were in-service for the full time period. In these cases, the UHU was calculated on time in-service.

Eleven units are above the 30 percent UHU industry threshold for EMS units. Like the effect of concurrent calls, increased UHU reduces the amount of time a particular unit is available, which also places a strain on the system as other units have to respond beyond their first-due area.

ESCI has found that fire-based EMS transport services typically try to keep UHU for their units at or below 30 percent. UHU rates higher than 30 percent tend to cause system failure in other areas, such as response time performance and fire effective response force (ERF) delivery degradation. When UHUs approach and exceed 30 percent that implies that units are not available at least 30 percent of the time in their first due areas for additional emergency responses and other duties.

In May 2016, Henrico County (VA) Division of Fire published an article after they studied their department's EMS workload.⁹ The commitment factors discussed were calculated as ESCI has calculated UHU for PCFR.

As a result of the study, Henrico County Division of Fire developed a general commitment factor scale for their department. The next figure is a summary of their findings as it relates to commitment factors.

⁹ How Busy Is Busy?; Retrieved from <https://www.fireengineering.com/articles/print/volume-169/issue-5/departments/fireems/how-busy-is-busy.html>

Figure 45: Commitment Factors as Developed by Henrico County (VA) Division, 2016

Factor	Indication	Description
0.16–0.24	Ideal Commitment Range	Personnel can maintain training requirements and physical fitness and can consistently achieve response time benchmarks. Units are available to the community more than 75 percent of the day.
0.25	System Stress	Community availability and unit sustainability are not questioned. First-due units are responding to their assigned community 75 percent of the time, and response benchmarks are rarely missed.
0.26–0.29	Evaluation Range	The community served will experience delayed incident responses. Just under 30 percent of the day, first-due ambulances are unavailable; thus, neighboring responders will likely exceed goals.
0.30	“Line in the Sand”	Not Sustainable: Commitment Threshold—community has less than a 70 percent chance of timely emergency service and immediate relief is vital. Personnel assigned to units at or exceeding 0.3 may show signs of fatigue and burnout and may be at increased risk of errors. Required training and physical fitness sessions are not consistently completed.

Multiple Unit Utilization

The next figure examines the frequency of multiple unit utilization (defined as an incident requiring at least two emergency response units) for incidents occurring in 2015 through 2018. The figure compares the dispatch of multiple units in relation to multiple units arriving on scene. The percentage of time the units arrive on the scene is a better measurement of multiple unit utilization.

Figure 46: Percentage of Incidents by Number of Units PCFR Responded, 2015–2018

Number of Units ¹	Dispatched	Arrived
1	57%	70%
2	30%	26%
3	8%	2%
4	3%	1%
5	1%	< 1%
6 or more	1%	< 1%

¹ This includes PCFR units only. Where PCFR responds as EMS only there is likely a unit from a city fire department on scene which is not included in this analysis.

As depicted in the previous figure in terms of multiple units dispatched, one or two units are dispatched for 87 percent of the incidents. When units without an arrival timestamp are removed, 96 percent of the remaining incidents required the use of one or two units—70 percent of the time one unit was utilized on the incident. This is reflective of the heavy EMS workload experienced by the department which is a high frequency but low resource demand emergency in contrast to the working fires which, while much less frequent, require a much greater commitment of resources.

System Performance

In the performance summary, ESCI examines emergency incident response time performance of PCFR. The data for this analysis is the 2015–2018 RMS data provided by PCFR. Mutual aid incidents outside the study area, data outliers, non-emergency incidents, and invalid data are removed from the data set whenever possible.

In analyzing response performance, ESCI generates percentile or fractile measurements of response time performance. The use of percentile measurements of the components of response time follows the recommendations of industry best practices. The best practices are derived by the Center for Public Safety Excellence (CPSE), Standard of Cover document and the National Fire Protection Association (NFPA) 1710: *Standard for the Organization and Deployment of Fire Suppression Operations, Emergency Medical Operations, and Special Operations to the Public by Career Fire Departments*.

The *average* measure is a commonly used descriptive statistic also called the mean of a data set. The most important reason for not using the average for performance standards is that it may not accurately reflect the performance for the entire data set and may be skewed by data outliers, especially in small data sets. One extremely good or bad value can skew the average for the entire data set. Percentile measurements are a better measure of performance since they show that most of the data set has achieved a particular level of performance. The 90th percentile means that ten percent of the values are greater than the value stated, and all other data is at or below this level. This can be compared to the desired performance objective to determine the degree of success in achieving the goal.

Each component in the total response time continuum is analyzed individually and that individual performance is measured. The total response performance therefore is not cumulative. As each is analyzed as an individual component and the point at which the fractile percentile is calculated, it exists as a set of data unto itself. Tracking the individual pieces of total response time facilitates identifying deficiencies and areas for improvement.

The response time continuum—the time between when the caller dials 911 and when assistance arrives—is comprised of several components:

- **Alarm Answering Time:** The time interval that begins when the alarm is received at the communication center and ends when the alarm is acknowledged at the communication center.
- **Alarm Processing Time:** The time interval from when the alarm is acknowledged at the communication center until response information is transmitted via voice or electronic means to emergency response facilities and emergency response units. In Polk County, there is an initial pre-alert that is sent to selected pagers at the time the incident is sent by the call-taker to the dispatcher and therefore prior to the complete verbal dispatch to all responding units over the radio. The PCFR RMS data only tracks the latter time, while the CAD system tracks both.
- **Turnout Time:** The amount of time between when units are notified of the incident and when they are responding.
- **Travel Time:** The amount of time the responding unit spends on the road to the incident.
- **Response Time:** A combination of turnout time and travel time. The most commonly used measure of fire department response performance.
- **Total Response Time:** The time from when the 911 call is answered until the dispatched unit arrives on the scene.

Total response time is the amount of time a resident or business waits for resources to arrive at the scene of an emergency beginning when the 911 call was first placed. This process begins for PCFR once the appropriate unit is dispatched by the PCSO communications center. The NFPA standard for alarm handling and call processing is derived from NFPA 1221: *Standard for the Installation, Maintenance, and Use of Emergency Services Communications Systems* and provides for communication centers to have alarm answering time of not more than 15 seconds, 90 percent of the time, and not more than 20 seconds, 95 percent of the time. Additionally, NFPA 1221 requires the processing of the call to occur within 60 seconds, 90 percent of the time for high priority incidents. Similarly, NFPA 1710 requires the call processing time to be 60 seconds or less, 90 percent of the time.

Figure 47: NFPA 1710 Standards for Fire/EMS Responses

Response Interval	NFPA Standard
Alarm Processing	60 seconds or less at 90% for High Acuity Calls
Turnout Time	60 seconds or less at 90% for EMS 80 Seconds or less at 90% for Fire and Special Operations
Travel Time	240 seconds

In addition to the standards or benchmarks for response time described in Figure 47, Polk County has adopted their own standards of coverage. The standards adopted by PCFR are provided in the following figure.

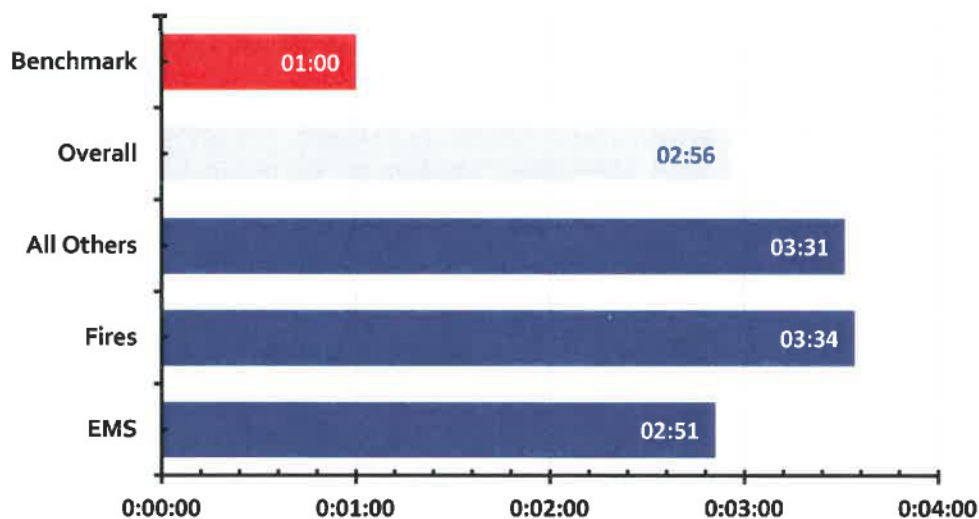
Figure 48: Polk County Adopted Standards for Fire/EMS Responses

Response Interval	Adopted Standard ¹
Turnout Time at 90th Percentile	60 seconds, 07:00–22:00 90 seconds, 22:00–07:00
Travel Time at 90 th Percentile (Initial Unit)	8 minutes, urban/suburban 13 minutes, rural

¹ Urban/Suburban and Rural have not been defined as they relate to these standards.

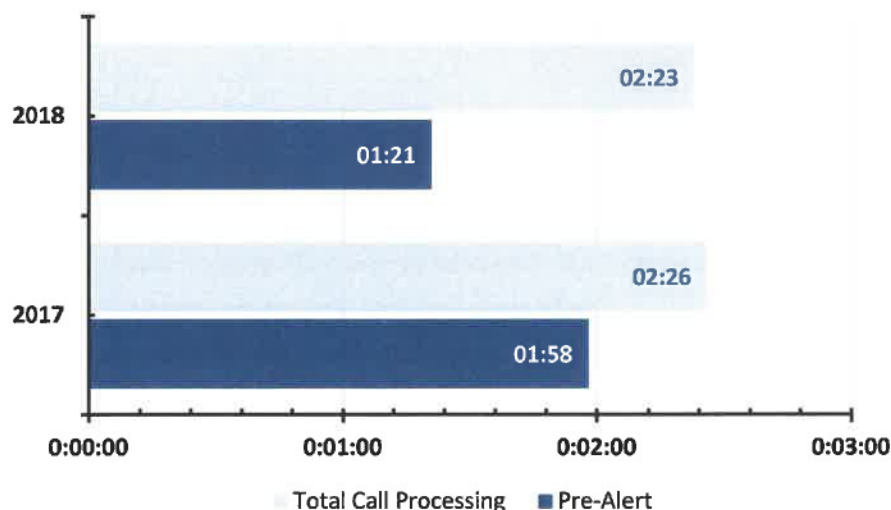
While alarm answering data was not available from the PCFR RMS, the Polk County Sheriff's Office Communications Center reported that in 2017, PCSO answered 99.4 percent of all 911 calls within 10 seconds; well within the industry benchmark.

The next figure is the first in the analysis of performance for the period 2015–2018 and illustrates the call processing performance for PCSO communications based on PCFR RMS data. This RMS data does not include the timestamps necessary to calculate the pre-alert performance which occurs before the full unit notification process (phase two) is completed and overstates the time it takes the ECC to notify selected PCFR units of an emergency.

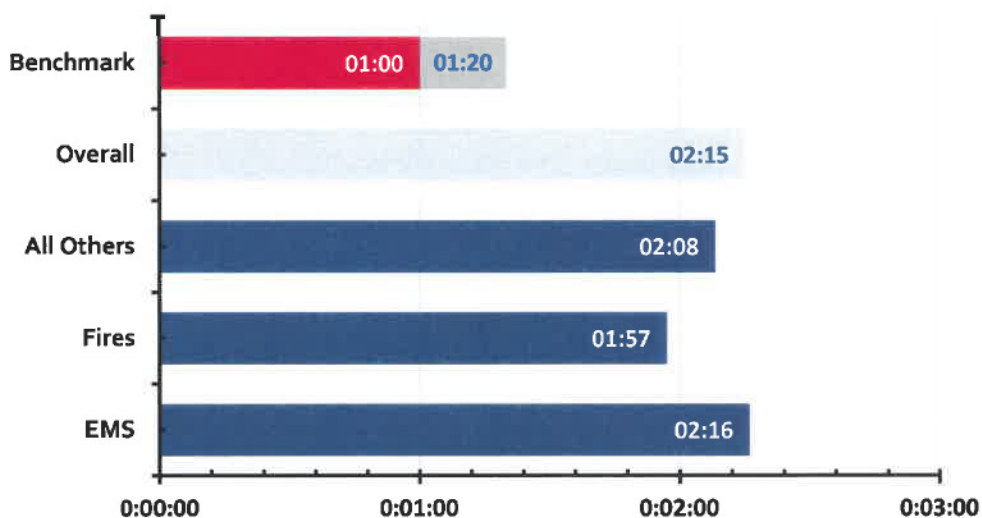
Figure 49: PCFR Alarm Processing Performance, 2015–2018 PCFR RMS Data

As indicated in the previous figure, alarm processing time based on RMS data exceeds the industry benchmark (shown in red) over all categories of dispatch, however, this does not include the pre-alert performance. This is significant as it creates delays in notifying all responding units, therefore increasing the time of arrival to provide service to the customer. ESCI recommends a review of all factors related to call taking and dispatching (protocols, adequate staffing, training, fatigue among dispatchers, any technology issues, and time of day to name a few).

The next figure represents an analysis of the pre-alert performance as this process allows for the first due station to be alerted to an incident before the verbal dispatch of all units required for the emergency.

Figure 50: PSCO ECC CAD Pre-Alert Performance, 2017–2018

As illustrated, the pre-alert pages on high acuity calls were sent within 01:58 in 2017, and 01:21 in 2018 at the 90th percentile.

Figure 51: PCFR Turnout Performance, 2015–2018 PCFR RMS Data

Turnout time also exceeds the benchmark on average. Factors for this occurrence could include time of day (natural delay when sleeping during overnight hours), station design (easy access to apparatus), personnel involved in other activities (cooking, physical fitness training, visitors, etc.), grocery shopping, or company training. Personnel should ensure radios are properly monitored when outside the fire station so immediate notification is received, and station speakers should be adjusted to a level to ensure personnel clearly receive notification of an incident (to include outside speakers should personnel be involved in outside activities).

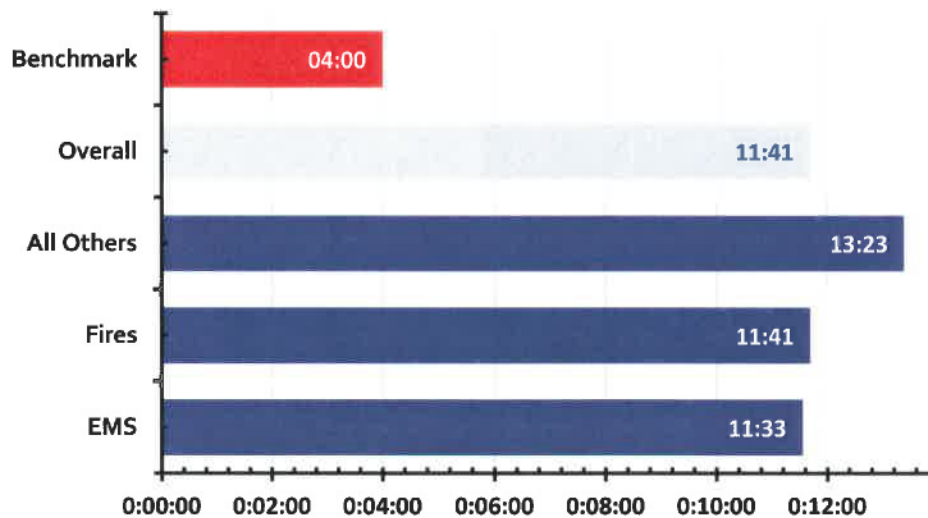
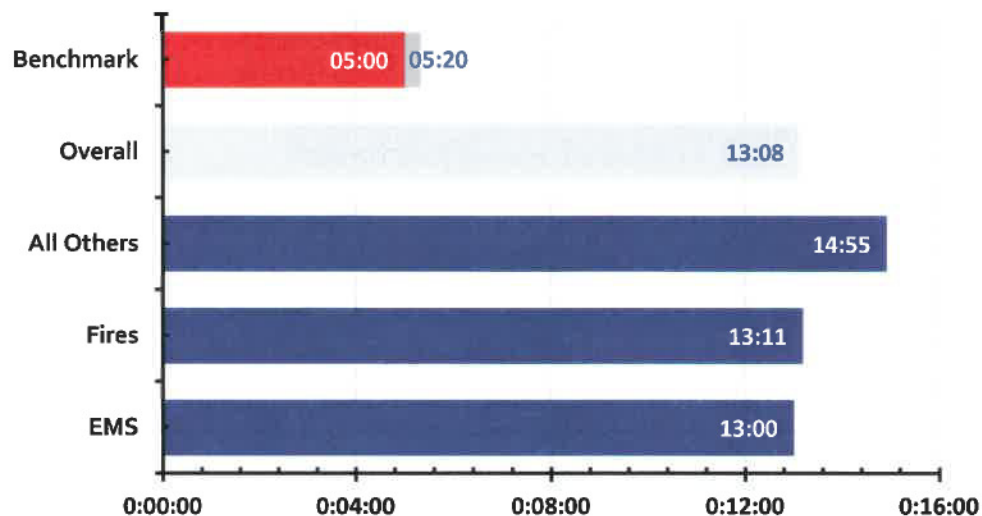
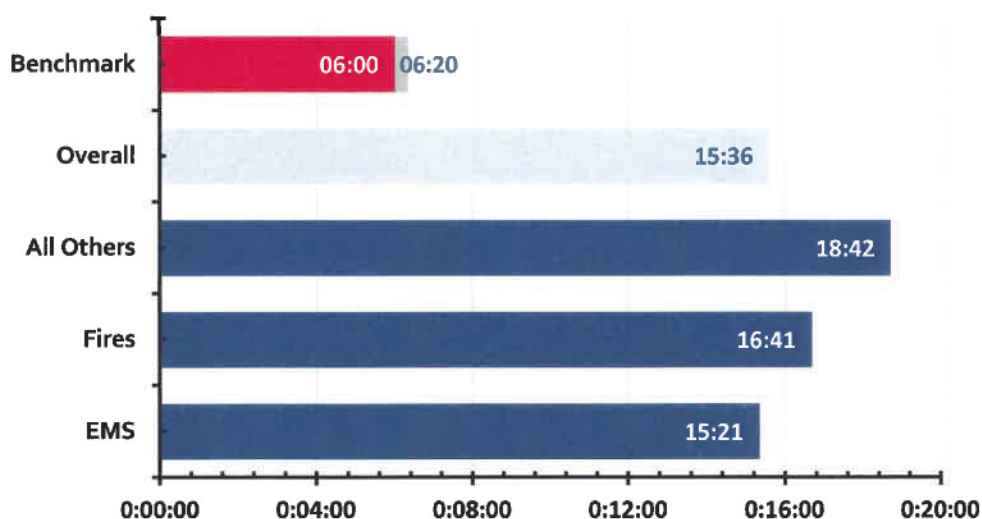
Figure 52: PCFR Travel Time Performance, 2015–2018 PCFR RMS Data

Figure 52 illustrates PCFR initial arriving unit travel time for the review period with the urban benchmark shown in red. Travel time can be affected by factors such as traffic, road conditions, and weather. One obvious possibility for exceeding the benchmark in this category is the layout of the County, which factors into the overall response time for the department. Traveling to rural portions of the County with long distances and unpredictable terrain and road networks can create longer travel times. It is recommended that personnel become very familiar with their respective first-due response areas and have a general knowledge of their second-due area to ensure the shortest routes are taken to incidents.

Figure 53: PCFR Response Time Performance, 2015–2018 PCFR RMS Data

PCFR response times (turnout plus travel) for the initial arriving unit according to Figure 53 are more than double the stated benchmark. The combination of all the previous factors in response time calculations certainly contribute to this result. The department should assess all the previous potential factors mentioned and consider actions to improve performance where possible. Further, it is important to remember that this presentation of PCFR response time represents the initial arriving unit only. And, while this may not be as critical a factor for most incidents where a single unit is required, it is not reflective of the critical need for timely arrival of an effective response force for structural fires which approaches 30 minutes at the 90th percentile for PCFR.

Figure 54: Total System Response Time Performance, 2015–2018 PCFR RMS Data



In reviewing all previous figures related to the various components of total system response performance, all except initial call handling time exceed the stated industry and/or County adopted benchmarks. Based on these results, additional training should be considered to include dispatchers and fire personnel to improve performance in each component. Further, after thorough review of each factor, the County should consider where and what actions it could take to improve overall performance given citizen expectation and willingness to support necessary funding to implement improvements.

Mutual and Automatic Aid Systems

Mutual aid is typically employed on an as needed basis where units are called for and specified through an Incident Commander. Automatic aid differs from mutual aid in that under certain mutually agreed upon criteria, resources from the assisting agency are automatically dispatched as part of the initial response. These agreements facilitate the necessary number of personnel and the right number of appropriate apparatus responding to a specific incident. Automatic aid response resources are often defined in the dispatch run cards for the participating agencies. Mutual and automatic aid operations are an integral part of emergency operations.

There are mutual and automatic aid agreements in place between PCFR and other agencies in the County and surrounding counties. Additionally, Polk County is a co-signer of the Statewide mutual aid plan. The following figure shows the other fire departments with which agreements are in place.

Figure 55: PCFR Mutual/Automatic Aid Agreement

Agency	Type
Auburndale	MA
Bartow	MA
Davenport	MA
Dundee	MA
Fort Meade	MA
Frostproof	MA
Haines City	MA
Lake Alfred	MA
Lake Hamilton	MA
Lake Wales	MA
Lakeland	MA
Mulberry	MA
Winter Haven	MA
Plant City	MA
Orange County Fire Rescue	MA/AA
Lake County EMS	MA/AA
Osceola County Fire Rescue	MA/AA
Reedy Creek Improvement District	MA/AA
Highlands County EMS	MA
Hardee County Fire Rescue	MA
Hillsborough County Fire Rescue	MA
Pasco County Fire Rescue	MA

The following figure is based on 2015 through 2018 RMS data as it related to mutual aid and automatic aid given and received.

Figure 56: PCFR Mutual and Automatic Aid Summary, 2015–2018

Type	2015	2016	2017	2018
Mutual Aid Received	163	204	250	425
Automatic Aid Received	165	215	165	466
Mutual Aid Given	258	338	402	579
Automatic Aid Given	394	550	596	1,330
Other Aid Given	64	89	214	–
Net (Aid Given - Received)	388	558	797	1,018

All agreements should be reviewed and modified as necessary to ensure all parties receive maximum benefit to provide optimal service to customers without compromising coverage within each jurisdiction. Mutual and automatic aid operations are an integral part of emergency operations within the study area. This increases the concentration of resources available to mitigate incidents throughout the study area. The best use of mutual and automatic aid is dependent on the departments working well together. To be most effective, the following should be considered:

- Fireground operations must be conducted in a similar manner and should be based on common Standard Operating Guidelines.
- Firefighters must know how to work in concert with personnel from another agency, based on common training programs and procedures.
- Dispatch procedures should be in place that clearly define which response types and locations are to receive Automatic Aid response.
- Procedures for the request of and provision of mutual aid should be clearly established in the Mutual Aid Agreement.
- Personnel should be fully trained on mutual and automatic aid practices and remain informed on changes.

TRAINING PROGRAMS

Training Competencies

Fire Rescue

Providing safe and effective fire and emergency services requires a well-trained workforce. Training and education of personnel are critical functions for Polk County Fire Rescue. Without quality, comprehensive training programs, emergency outcomes are compromised, and emergency personnel are at risk.

One of the most important jobs in any department is the thorough training of personnel. The personnel have the right to demand good training and the department has the obligation to provide it.¹⁰

Initial training of newly hired firefighters is essential, requiring a structured recruit training and testing process. Beyond introductory training, personnel need to be actively engaged on a regular basis and tested regularly to ensure skills and proficiencies are maintained. To accomplish this task, agencies must either have sufficient instructors within their own organization or be able to access those resources elsewhere. Training sessions should be formal, frequent, consistent and follow prescribed lesson plans that meet specific objectives. In addition, a Safety Officer should be dedicated to all training sessions that involve manipulative exercises.

In the following pages, ESCI reviews Polk County Fire Rescue Fire training practices and compares them to national standards and best practices, and recommends modifications, where appropriate.

General Training Competencies

For training to be fully effective, it should be based on established standards. There are a variety of sources for training standards. PCFR uses the National Fire Protection Association (NFPA), International Fire Service Training Association (IFSTA), Florida State Fire Marshal Bureau of Fire Standards and Training, and PCFR developed and established job performance check offs as the basis for its fire suppression training practices. State Department of Health, Bureau of EMS and national Emergency Medical Services standards, and local Medical Director protocols are used as the baseline for medical training coursework.

¹⁰ Klinoff, Robert. *Introduction to Fire Protection and Emergency Services*, Jones and Bartlett, 2013. Burlington, MA.

A review of the general training competencies reveals that the necessary baseline subject areas are identified, and the department is trying to address them. Most of the training that occurs for incumbent personnel is online training through Target Solutions and lacks hands-on, company-level or multi-company drills. This deficiency can be attributed to time limitations resulting from high call volume throughout PCFR as well as an understaffed training division, and additional responsibilities placed upon training personnel. PCFR employs various competency level task books for new employees, Paramedic, Driver/Engineer, and Captain positions. Data provided to ESCI indicates that plans are in place to fill vacancies in the Training Division and develop a consistent department-wide training program.

Figure 57: Polk County Fire Rescue Training Program

General Training Competencies	PCFR
Incident Command Certification Levels Defined	Department SOP, NIMS I-100-800 Series, IMS Blue Card system.
Firefighter Accountability Procedures in Place	Department "Passport" system in place. Blue Card system being implemented.
Safety Procedures in Place	Department SOPs introduced in new-hire orientation.
Recruit Academy (Internal/External)	New hires drawn from external academies. New hire orientation is internal and guided by SOPs and new hire task books.
Specialized Rescue (Technical Rescue, High Angle)	Forty members trained to Florida Urban Search and Rescue (FLUSAR) Operation level. Five members at Technician level.
Hazardous Materials Response	All PCFR operations personnel training to Operations level. 46 members trained to Technician level.
Wildland Firefighting (certification)	No
Radio Communications and Dispatch Protocols	New employee orientation (Redbook), department SOPs, Chief Officer meets with E-911 communications monthly.
Paramedic/EMT Training	Hands-on skills evaluations, online through Target Solutions®, EMS symposiums at local college (Polk State).

PCSO Communications

PCSO ECC uses internal and external training sources. Internal training is conducted using an in-house training staff. This training includes the State required Telecommunicator training necessary to sit for the State Telecommunicator exam. A State exam is administered by the State and requires a passing grade for a Dispatcher to receive their certification. Other classes provided by the in-house staff include but are not limited to the required County HR classes received by all employees and any updates as they occur.

External training includes classes in Emergency Medical Dispatch (EMD) and Emergency Fire Dispatch (EFD) by Priority Dispatch Instructors. After completion of these courses, students are required to take and pass an exam to receive their certification.

Training Administration

To function effectively, a training program needs to be managed. Administrative program support is vital to program success and at times suffers due to budgetary constraints or competing organizational priorities. An additional element of effective administration is the development of program guidance in the form of training planning, goals, and defined objectives. These goals and objectives should be clearly communicated to all levels of the organization for program awareness, input, feedback, and support.

The department, having recognized the need to keep pace with community growth, plans to add fire stations and fill open positions on a regular basis in the next few years, which will result in a significantly increased training workload by adding people that need to be trained. ESCI encourages PCFR to reevaluate the resources assigned to this function and add personnel and funding, as needed.

The Polk County Fire Rescue Training Program operates under the oversight of a Deputy Chief of Training. The Training Chief is relatively new to this assignment (less than a year) and currently has six Officers assigned to training, five of which are filled. The division is funded to accommodate eight personnel for this function. Each of these Officers provides training to operational personnel and they function as the primary instructors. Additionally, each Captain serves as a Safety Officer to assist on-duty Battalion Chiefs on fire and rescue scenes. When considering that the Chief of Training is responsible for administrative oversight, instruction, course development, and record keeping, it can be assumed that the Training Division is significantly overburdened. It is recommended that PCFR evaluate the need for additional Training Division positions to support the current Chief of Training. In addition, it is recommended that opportunities be explored for shared training delivery in partnership with neighboring agencies such as Polk State College and Ridge Technical Center to mitigate the long-range future demands that will be placed on the department's training program or, alternatively, plan for additional future staffing in the division.

The following figure reviews the Polk County Fire Rescue Training Program administration and management practices.

Figure 58: Training Program Administration and Management

Training Program Administration & Budget	PCFR
Individual Responsible for Fire and EMS Training	Deputy Chief of Training
Funded Positions Assigned to Training Division	8 Fire Captain positions (FY 2018), 6 positions currently filled
Certified Instructor Qualifications	Florida Fire Officer 1 for general firefighting, Florida Fire Officer 2 for Fire Officer level classes, EMS classes require URTI Level A Instructors
Priority of Management Toward Training	Top Priority
Clerical Staff Support Assigned to Training	None
Condition of Facilities for Training Administration	Fair, Training division is not centrally located
Adequate Office Space, Equipment, Supplies	Yes, office space for Training Captains are located throughout County due to space limitations
Current Annual Operating Budget for Training	Not identified
Current Fiscal Reserve Amount for Training Needs	Not identified

Training Schedules

To be able to deliver effective training to fire and EMS personnel, some resources are necessary to arm the trainer with the tools needed to provide adequate educational content. In addition to tools, effective methodologies must be employed if delivery is to be sufficient to meet needs. With 44 stations (34 of which are fire stations and 10 of which are EMS-only) and approximately 185–187 members on duty protecting Polk County and responding to an average of 261 calls daily, coordination and completion of company level proficiency training and multi-company drills is infrequent.

Training Program Planning

While the Training Program operates effectively overall, it does so in the absence of a structured program planning process. To be fully effective, training delivery should be based on:

- Periodic training needs assessments
- Defined annual program goals, based on a needs assessment
- Specific delivery objectives, addressing program goals
- A process of performance measuring and monitoring
- Periodic re-evaluation and modification

ESCI recommends an annual training plan be developed based on the above criteria including clearly defined program goals and objectives.

Training Facilities

As mentioned earlier, training equipment, props, and facilities are lacking at the local level, but the agency uses available space and adjuncts to augment the training experience. Additional resources should be invested in these important aids to training. For PCFR's training program to function at a high level, it could be further improved by a more formalized structure, complete with a strategic plan, goals and objectives, updated position task books, a perpetual five year training calendar, training props and aids identified, annual funding secured, and a centralized office space and training facility that is accessible for all PCFR members.

The department lacks adequate resources for training, inclusive of classroom and drill ground assets. Most of the drill ground assets as illustrated in the following figure are located off-site and require scheduling through another agency. Classroom instruction is an essential component for preparing emergency responders with knowledge and skills. A training facility or drill ground is a second indispensable element. Training facilities provide a controlled and safe environment for simulating emergencies designed to develop and test the skills of emergency workers.

Constructing a modern, centralized training facility to comply with industry standards having classrooms, practice grounds, training tower, live-fire building, and training props is a significant investment of capital. In addition, the on-going cost of operating and maintaining a training facility further advances the case for joint ownership. Due to the expense involved, a cooperative approach is the most feasible. ESCI considers the need for a quality training facility to be a high priority for the department and recommends that it consider working with neighboring agencies to include PCSO to develop plans for leveraging training resources.

Figure 59: Training Facilities and Resources

Training Facilities & Resources	PCFR
Adequate Training Ground Space/Equipment	PCFR currently utilizes an abandoned jail and house for training space
Description of Training Facilities (Tower, Props, Pits)	All props utilized by PCFR are off-site (Ridge Technical Center, Winter Haven)
Classroom Facilities Adequate	Yes
Instructional Materials Available	Textbooks and digital programs (Fire Studio Simulator and Target Solutions)
Video/Computer Simulations Available	Fire Studio, Blue Card Incident Management Training, and Hazardous Material programs
EMS Equipment, Props and Simulators	Yes, airway intubation props, ambulance patient compartment simulator, Mediman and Ambuman patient props
Other EMS-Related Training Resources	Off-site, Polk State College, South Florida College, and Target Solutions®

Training Procedures, Manuals, and Protocols

Training Manuals Procedures and Protocols

A departmental training manual is the foundation upon which the delivery of educational content is based. In the absence of this kind of document, personnel will tend to train in “the way we do it here,” rather than in a manner that is consistent with the department’s established operational practices and standards.

Several components of a training manual are in place in PCFR, including task-oriented books of department-established standards for new/probationary Firefighters, Paramedics, Driver/Engineers and a Company Officer manual. However, none are fully completed, and all are stand-alone documents. The development of a single, comprehensive, departmental training manual will prove to be invaluable in meeting growing training demands.

Training Delivery Methodology—Competency-Based Training

The amount of training delivered to PCFR personnel is currently based on contact hours. The fundamental objective is to deliver 240 hours of training annually, a measure used by the Insurance Services Office (ISO) for purposes of fire department ratings. Other minimums are in place including those related to state certification maintenance and specialized functions such as Technical Rescue and Hazardous Materials Response Teams.

An hours-based approach is appropriate and generally effective. However, the shortcoming of the methodology is that sometimes training will be delivered simply to meet minimum hour requirements when, in fact, the individuals receiving the training are already fully versed in the subject matter. Time in this instance would be better spent by: 1) subjecting the students to a skills performance demonstration; and 2) once competency in the skill area is demonstrated, use the remaining time to address new skills or subject areas.

Under a competency-based system, an evaluation of skill performance is conducted at scheduled intervals to determine if the person being evaluated can perform the tasks in accordance with pre-determined standards. Those skills that are performed well require no additional training. Those skills not performed well are practiced until the standard is met. This approach maximizes the time used for effective training. Further, it ensures that members are performing at an established level. Specialty skills can be evaluated in the same manner with further training provided as needed. Ideally, the competency-based training approach is used on an ongoing basis. For example, each quarter different skills are evaluated on an individual basis.

To institute a competency-based approach to training, all department established and needed skills must be documented to describe the standard of performance expected. This would include all skills such as hose handling, apparatus operation, EMS procedures and protocols, use of equipment and tools, forcible entry, ventilation, tactics and strategy, and others.

As discussed, PCFR's training program is generally designed around training content that is identified as necessary to meet ISO criteria, while also making use of the departmental standards and state continuing education requirements. Implementation of a competency-based approach to identifying training needs, with performance requirements as a foundation, offers a more effective and efficient method of training program management, which will also address ISO standards.

Safety is an important consideration during training operations. NIMS forms and requirements of SOP 301 are integrated into the training. After-Action Reviews are a relatively new procedure for PCFR and are conducted as directed by the Fire Chief. There is not a training procedures manual in place or a written procedure or policy for Post-Incident Analysis or After-Action Reviews of incidents.

PCSO Communications

Training procedure manuals and EMD/EFD protocols are located within the PCSO ECC. EMD and EFD protocols are loaded into the CAD system and manual card sets are located at the consoles.

Training Records

Polk County Fire Rescue's Training Division has established accountability for receiving and keeping up with the training schedule and training topics through an online training data base. Documentation is maintained, and the Training Division has helped improve training overall. There are training manuals and schedules for each operational discipline to follow for proficiency and completion, and the training meets state and nationally recognized standards.

That percentage of PCFR's annual budget dedicated to training was not determined. It is essential that an annual departmental training plan is developed with funding justification to support a training program of this size and scope. Training records are well maintained by PCFR, likely as a result of the Training Division's approach and presence. The utilized training database, Target Solutions® software Learning Management System (LMS) is the primary source of training and is done via computer that records and tracks individual training hours and competency training.

As previously mentioned, training equipment, props, and facilities are lacking at the local level, but the agency uses available space and adjuncts to augment the training experience. Additional resources should be invested in these important aids to training. For PCFR's training program to function at a high level, it could be further improved by a more formalized structure, complete with a strategic plan, goals and objectives, updated position task books, a perpetual five-year training calendar, training props and aids identified, annual funding secured, and a centralized office space and training facility that is accessible for all PCFR members.

Figure 60: PCFR Training Recordkeeping and Personnel Trained

Record Keeping and Hours	PCFR
Individual Training Files Maintained	All individual and company fire/EMS training records are maintained in Target Solutions® database
Responsibility for Training Records	Deputy Chief of Training
Training Equipment Inventoried (Frequency)	Yes, biannual for accreditation
Training Record Entry	Captains with validation from Deputy Chief of Training
Number of Personnel Trained (YTD)	555
Total Training Hours Delivered (2018)	109,760
Fire-Related Training Hours	18,648
EMS-Related Training Hours	91,111

PCSO Communications

All recordkeeping and personnel training files are located within the PCSO ECC.

SECTION II: INCIDENT ANALYSIS

INTRODUCTION TO INCIDENT ANALYSIS

This section of the report focuses specifically on the residential structure fire that occurred in Polk County on November 23, 2018 which resulted in a civilian fatality. This incident analysis contains two major parts; the first section provides the reader with a detailed objective review of all issues surrounding the incident from environmental factors to agency tactics. This includes an examination of how the responders and the department handled the incident from the first E-911 call through post-incident actions. This section proceeds from a briefing of the responders to the use of social media and handling of media interest post-incident. In the second part of this section, ESCI team members compare department actions against industry standards and best practices presenting findings and lessons learned.

INCIDENT REVIEW

The PCSO Communications Center was notified of a house fire at [REDACTED] when they received a 911 call at 19:06:49 (7:06 pm) on November 23, 2018. The caller was the sole occupant of the house and reported that her house was on fire and she was home alone and on a walker. At 19:07:31—according to the transcript, a pre-alert page was sent to selected PCFR pagers including the first due engine company (Engine 6) followed by audible tones alerting the full first alarm assignment beginning at 19:08:28 and completed at 19:08:41.

The following sections provide the essential, objective information that ESCI used for the analysis of this incident. This information was obtained through an intensive review of available documents and face-to-face interviews with over 30 PCFR and PCSO personnel.

Incident Timeline/Transcript Review

Fire Rescue

ESCI reviewed the E-911 call from the residence to the communications center and matched the time stamped exchange between the resident and Call-Taker along with communications to/from responding PCFR units. Each of the responding units assigned to the incident were identified to include their response time and illustrated in the following figure with units on the initial dispatch highlighted in yellow. The full transcript is provided in Appendix A.

Figure 61: PCFR Response to 13802 Rockridge Road, November 23, 2018¹

Unit	Pre-Alert Page ²	Dispatched	Enroute	Arrival	Response Time	Clear Time	Time On-Incident
EN006 ³	19:07:31	19:08:41	19:10:05	19:22:47	0:14:06	5:14:47	10:06:06
BC003 ³	—	19:08:41	19:10:13	19:29:50	0:21:09	4:46:15	9:37:34
MR006 ³	—	19:08:41	19:08:51	19:27:38	0:18:57	4:26:41	9:18:00
BC001 ³	—	19:08:41	19:10:58	19:29:21	0:20:40	4:47:23	9:38:42
SQ007 ³	—	19:08:41	19:08:59	19:30:12	0:21:31	4:24:40	9:15:59
EN039 ³	—	19:08:41	19:09:11	19:35:40	0:26:59	4:40:51	9:32:10
EN023 ⁴	—	19:15:58	19:16:01	19:26:30	0:10:32	4:45:19	9:29:21
TE039	—	19:13:14	19:13:14	19:37:21	0:24:07	4:40:46	9:27:32
TE004	—	19:53:02	19:54:03	20:45:01	0:51:59	7:48:11	11:55:09
BR023 ⁵	—	19:55:15	19:55:18	19:55:21	0:00:06	5:17:23	9:22:08
AT019	—	19:38:31	19:45:33	20:48:00	1:09:29	4:29:09	8:50:38
MD231	—	19:36:54	19:36:54	19:55:55	0:19:01	4:15:47	8:38:53
FC506	—	21:18:24	21:18:24	22:17:03	0:58:39	23:50:43	2:32:19
TE015	—	19:53:02	19:53:33	20:30:39	0:37:37	22:59:59	3:06:57
TE006 ⁶	—	19:24:27	—	—	—	19:34:03	0:09:36

¹ Source: PCFR provided RMS records.

² Initial Pre-Alert page is sent to FD pagers at the time the incident is entered into the CAD per PCSO ECC procedures. In this case the incident was created at 19:06:54 and initial pre-alert page sent at 19:07:31 to STA120P (E006).

³ Initial Assignment

⁴ Initially on a different incident and was staged—added themselves to the fire with approval of BC001.

⁵ BR023 was added to the CAD records when the unit was already on scene.

⁶ Tender 6 (TE006) did not respond to the incident although was listed in the RMS report.

Structure Description

Building

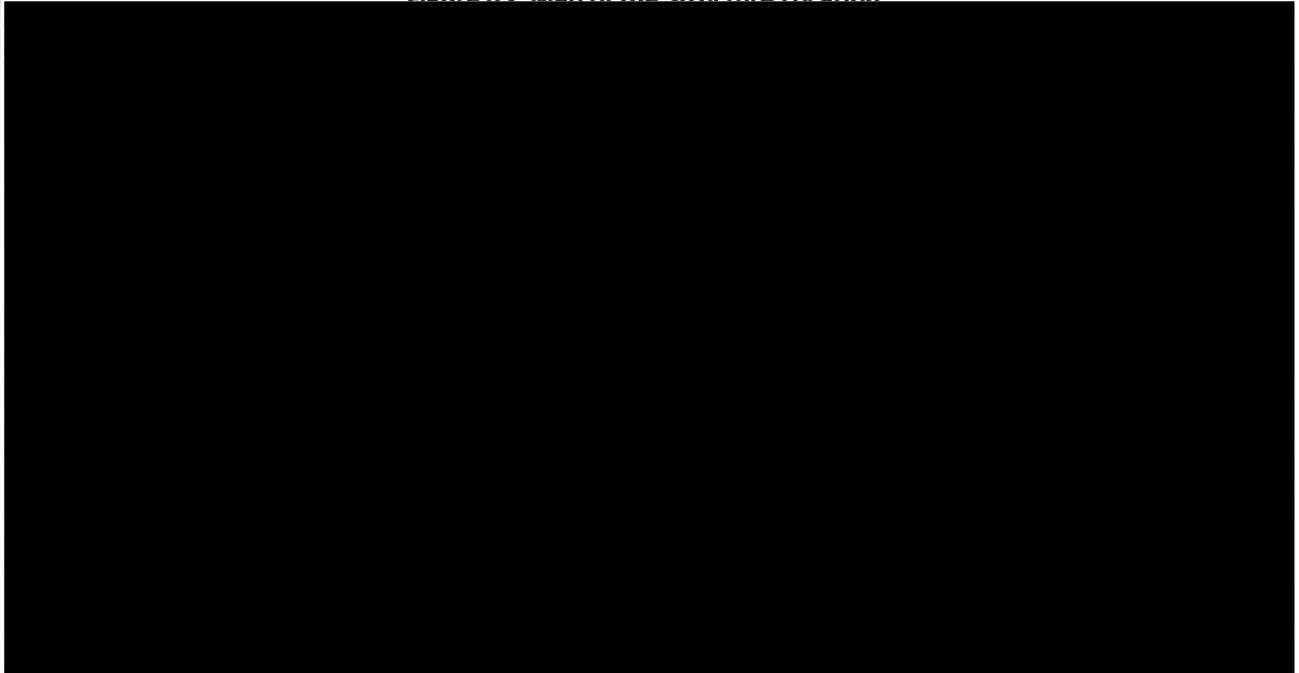
The Polk County Property Appraiser's Office website was reviewed for specific information relative to the building prior to the fire. The next figure is a descriptive summary based on the information available.

Figure 62: Structure Description Summary¹

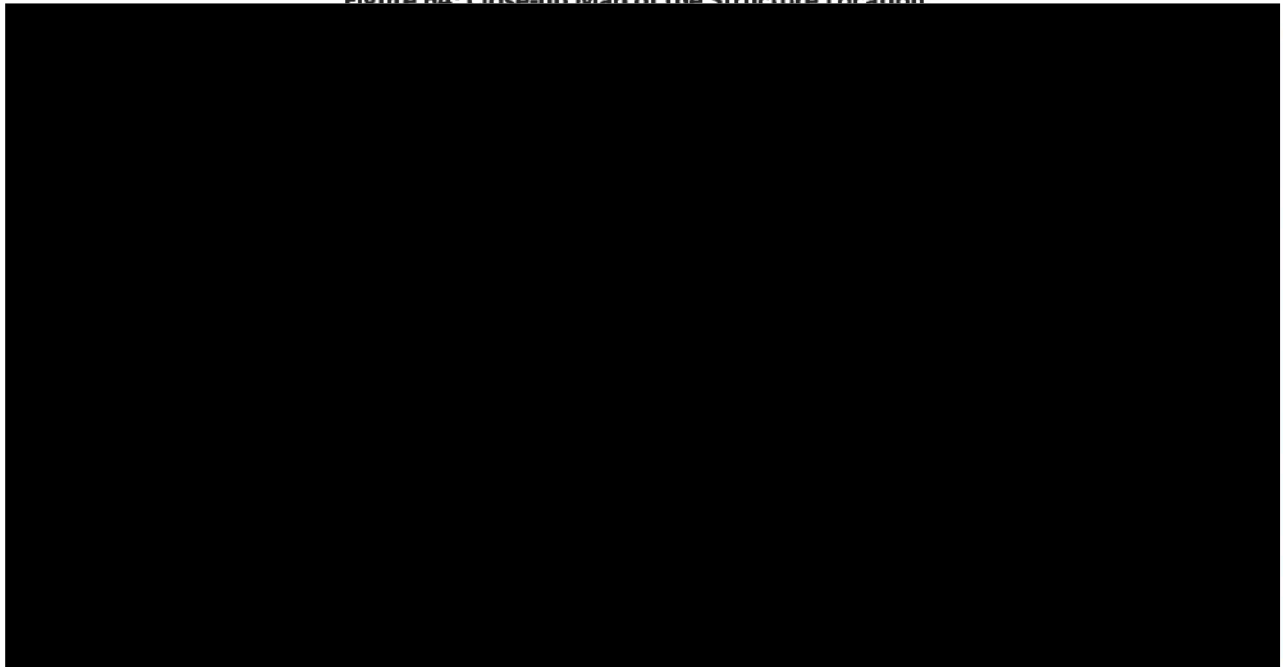
Category	Type
Year Built	1980
Style	Single Family
Substructure	Continuous Wall
Frame/Construction Type	Wood Frame
Exterior Wall	Wood
Roof Structure	Gable-Metal
Floor-Cover	Carpet-Vinyl
Interior Walls	Plywood Panel
Shape	Rectangle
Drive/Walk Way	Dirt
Fencing	None
Bedrooms	3
Baths	2
Fireplace	Yes
Gross Area	2,479 FT ²
Living Area	1,517 FT ²

¹ Source: Polk County Property Appraiser Records

The next figure illustrates the location of the structure relative to Rockridge Road (paved), the dirt road coming off of Rockridge Road, the dirt driveway to [REDACTED] and the surrounding area.

Figure 63: Map of the Structure Location¹¹

The next figure is a close-up of the property including the structure. The structure is located where the red roof can be viewed in this 2017 aerial map.

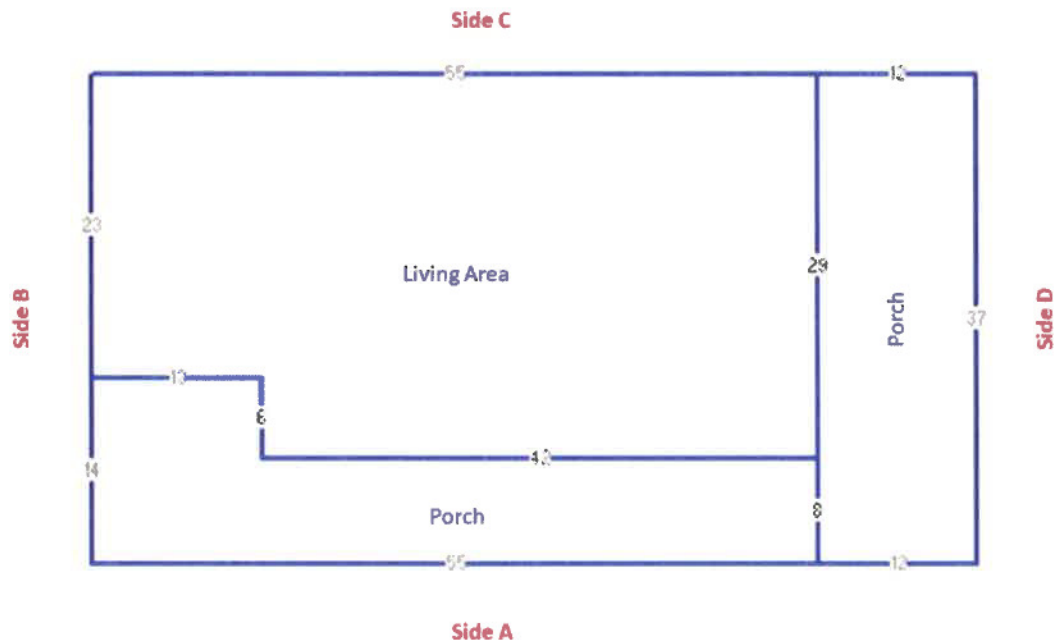
Figure 64: Close-up Map of the Structure Location¹²

¹¹ Adapted from: Polk County Property Appraiser Records

¹² Source: Polk County Property Appraiser Records

The next figure was also adapted from the Polk County Property Appraiser Records. It provides a layout of the structure including the living area and the porches.

Figure 65: House Layout Showing Sides¹³



Exposures

The structure was located in a heavily wooded area surrounded by mature trees as depicted in Figure 63 and Figure 64, and the vegetation was a significant exposure. There were not any exposed structures to the fire building. At least ten mature trees are located within six-to-eight feet of the structure.

Fuels

The home was a wood frame house (log cabin) situated in a densely wooded area. As such the building components including the exterior walls and interior walls of paneling all contributed to the heavy fire load. The roof was metal and therefore not itself a factor from a fuel perspective. However, the metal roof would have helped contain heat from the fire within the attic spaces.

¹³ Source: Polk County Property Appraiser Records

The Florida Forestry Service report indicates that fire danger from wildland fire was low on the incident date based on weather factors and a moderate drought index of 420 (out of 800) on the Keetch-Byram Drought Index (KBDI). The KBDI is a continuous reference scale for estimating the dryness of the soil and duff layers. The range of the index is determined by assuming that there is eight inches of moisture in a saturated soil that is readily available to the vegetation. The range is from 100—wet—to 800—extreme drought.

Recent studies by Underwriter's Laboratories (UL) have found that in compartment fires such as structure fires, flashover occurs within 4 minutes of first open flaming combustion in a modern fire environment.¹⁴ Modern home environments differ from traditional home environments with the addition of consumer furnishings made from petroleum-based products such as foam cushions and plastics. A compounding effect is also due to the advances in energy efficiency such as found in modern windows, insulation, etc. In addition, the UL research has identified an updated time temperature curve due to fires being ventilation controlled rather than fuel controlled as represented in the traditional time temperature curve.

Additional fuels included the exposed trees that were in direct proximity to the home that ignited and burned as a result of exposure and direct flame impingement.

Environmental Conditions

As part of the complete evaluation, environmental conditions were reviewed.

Weather

The reported weather conditions on the day and evening of the incident are illustrated in the next figure. The incident occurred after sunset and all units, except for Tender 4, were available prior to sunrise on the 24th. The temperature should not have been a factor as it would be considered mild in relation to temperatures faced by firefighters' other times of the year. The humidity was reported to be above 80 percent throughout the incident indicating a need for Commanding Officers to be alert to crews for signs of heat illness. It would not have been a contributing factor to flame spread and intensity. Winds at 2 MPH would likely not have been a factor in fire spread.

¹⁴ S. Kerber (2012) *Analysis of Changing Residential Fire Dynamics and Its Implications on Firefighter Operational Timeframes* <https://newscience.ul.com/Analysis>. Accessed 27 Mar 2019.

Figure 66: Summary of Weather and Related Factors on November 23 and 24, 2018 in Lakeland¹

Factor	Value
November 23, 2018	
Sunrise	06:55
Sunset	17:32
6:00 PM to 12:00 AM	
Temp High	70
Temp Low	63
Winds	ESE at 2 mph
Humidity	80%
November 24, 2018	
Sunrise	06:56
Sunset	17:32
12:00 AM to 6:00 AM	
Temp High	64
Temp Low	63
Winds	SSE at 1 mph
Humidity	90%

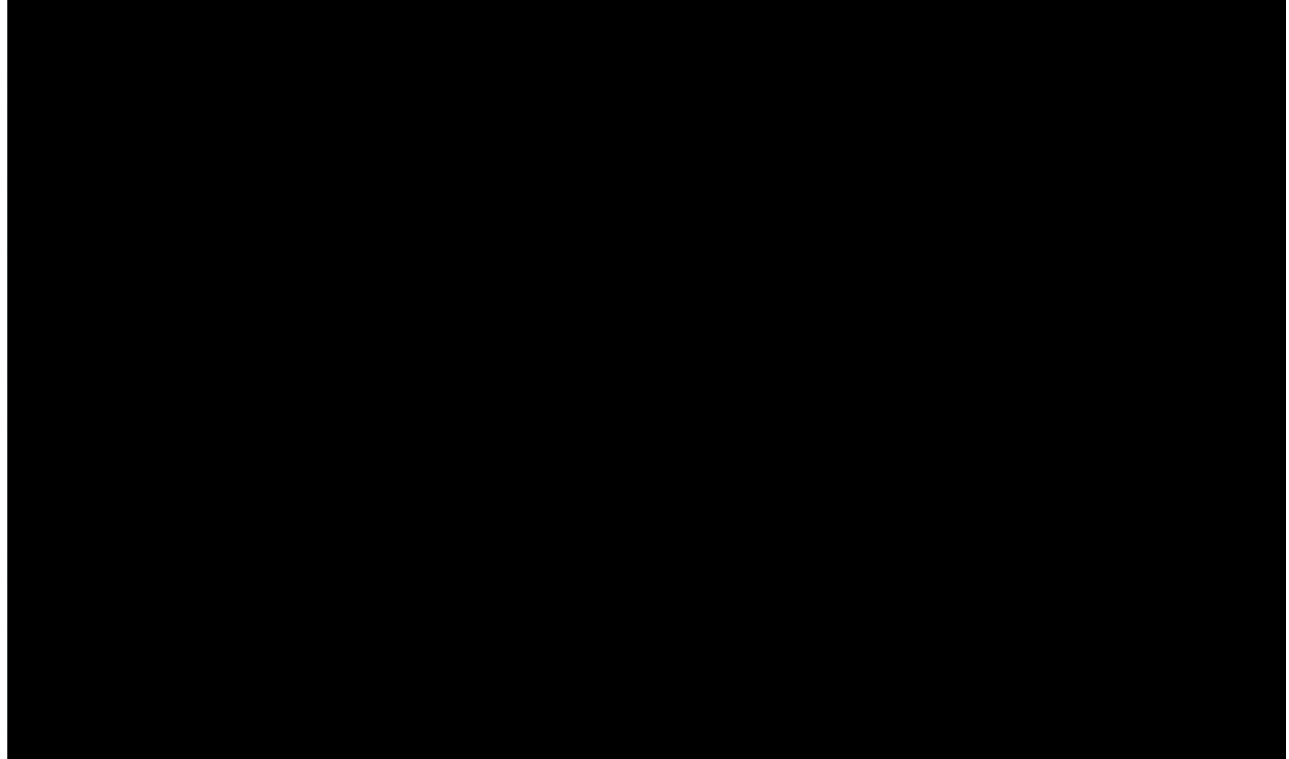
¹ Source: <https://www.timeanddate.com>

Accessibility

Access to the structure was blocked by overgrown trees, a ranch-style, post-framed entrance archway, and an uneven and unpaved roadway of loose dirt.

Accessibility to the house was poor at best from a fire response perspective. The house is secluded and is situated well off the main road to which the property is addressed. The house is located at the end of a narrow unpaved driveway approximately 300 feet from a wider dirt road that is approximately 1,000 feet from the main, paved road. The next figure illustrates the dirt road from Rockridge Road to the driveway of the house (yellow dashed line). There is no marked address on the home or on the main road (Rockridge Road). The home was not visible from Rockridge Road.

To access the house, after traveling up the dirt road (yellow dashed line in following figure) responders must then turn right onto the dirt driveway and travel approximately 300 additional feet to the house (blue dashed line).

Figure 67: Illustration of the Access to the Structure off Rockridge Road¹⁵

Firefighter Health and Wellness

Injuries

Two injuries to responding PCFR personnel were reported and documented as having occurred on the scene of the Rockridge Road fire. Both injuries were similar in nature and were documented as 1st degree burns to the arm and face due to close proximity to the fire for a prolonged period. The affected personnel were not treated for these reported injuries and only reported them after the fire on November 29, 2018.

Post Incident Stress Management

PCFR has four volunteer Fire Chaplains to provide support and minister to the needs of those affected by injury, fire, and loss of life in the community at the request of responding crews. Additionally, the Fire Chaplains aid in the form of talking with PCFR crews on the scene or upon return to the fire station after a traumatic loss of life. PCFR has resources available internally as well as from neighboring agencies to provide critical incident stress management and peer support to assist PCFR responders.

It was noted during ESCI's interview of those that responded to the fire scene on November 23, 2018, that responding PCFR personnel received no follow-up or debriefing of themselves or their crews post-fire. Nor were any of the department Chaplains asked to respond to the fire on behalf of firefighters or the family members of the deceased.

¹⁵ Retrieved from: <http://gisapps.polk-county.net/gisviewer/#/-81.96885/28.25141/18>

The safety and wellbeing of those that experience traumatic and tragic events such as a fire in a community require the attention of the fire department during and after the incident or event. It was also relayed during ESCI's onsite interviews that some of the responders to this fire were "struggling" or having difficulty processing the events surrounding the incident and the intense media and community scrutiny as a result. First responders perform their jobs under highly stressful circumstances where dealing with death and serious injury are a daily occurrence for the organization. Mental health is an important aspect to keeping employees healthy and effective in their jobs over the long term. This issue requires immediate attention and follow up for all the members that responded on November 23, 2018.

Moreover, helping those we serve by assisting them with their physical and emotional needs when they experience a tragedy such as helping with the collection of precious belongings or important documents, temporary shelter through agencies such as the Red Cross or Salvation Army, or contacting other family members are important components of community confidence and advocacy.

PCFR maintains a document, "After the Fire," for those affected by such an emergency that addresses many of the needs mentioned. Assigning an Officer or staff member to address these needs as a liaison (or utilizing one of the department chaplains) is needed and should be addressed promptly.

Water Supply Resources Available and Used

Due to the secluded location of the address and its rural setting, there are no fire hydrants in direct proximity to the home. The closest fire hydrant is in the Cypress Lakes subdivision approximately 6.5 miles away. Polk County Fire Rescue has strategically located nine water tenders in various fire stations that respond to rural locations to provide themselves an adequate water supply when combating structure or wildland fires in areas of limited or no municipal water supply.

It is standard practice to have a crew member bring their assigned water tender to the fire scene in areas of the County that are rural and lack hydrants and available water supply. There were no hydrants in the area. A tender shuttle was required. This was accomplished by utilizing three PCFR tenders and Tender 420 on mutual aid from the Auburndale fire department and a hydrant for refilling. These tenders and their capacities are shown in the next figure.

Figure 68: Tender Response Summary

Unit	Tank Capacity Gallons	Pump GPM
TE039	750	1,000
TE004	1,500	1,000
TE015	2,500	1,000
TE420	3,000	250

PCFR Fire Station 6 houses a 1987 Ford F800 water tender that carries 1,500 gallons of water. When interviewed, the first arriving officer on PCFR Engine 6 (Captain Williams) advised that he opted not to bring Tender 6, with 1,500 gallons of water because he felt he would need his firefighter right away should he need to make entry into the structure reported to be on fire.

Strategies and Tactics

Fire Officers develop fireground strategies after a conscious evaluation of critical fireground factors with consideration of the three main incident priorities: Life Safety (both the occupants and the responders), Incident Stabilization, and Property Conservation. These decision-making processes leads the Incident Commander to develop an overall strategy for the incident. This strategy is broad and in general what is expected to be accomplished in mitigating the incident. Tactics then are the more specific functions that are designed to meet the strategy. Tasks are assigned to carry out the tactics.

The initial strategy and tactics employed by the first arriving crew and that of the subsequent crews that arrived were defensive in nature and focused on water supply, applying water to the structure from an exterior position, and ensuring that the surrounding trees and understory did not carry fire further into the wooded area adjacent to the structure.

Scene Safety Considerations

Access

Arrival of the first initial units, Engine 6, Engine 23, Battalion Chief 3, and Battalion Chief 1 were able to assess that the structure on fire was not easily located which created a delay in arrival. Along with the combination of a long response time, this created conditions where every second counted if a rescue was to be successfully made. Access was also hindered by the 300-foot, tree-canopied dirt drive way leading to the actual address. Further, the secondary drive way also had a ranch-style arch with a name plate that also hindered direct access for a fire engine.

Water Supply

Along with access issues was the lack of a sustained water supply source in this area of Polk County that is considered rural. PCFR is aware of water supply issues in its rural settings and as a result the water tenders are maintained operationally ready to respond when needed. However, none of the nine water tenders that are in service are staffed around the clock to augment the responding firefighting force and provide a sustainable water supply for fire attack and extinguishment.

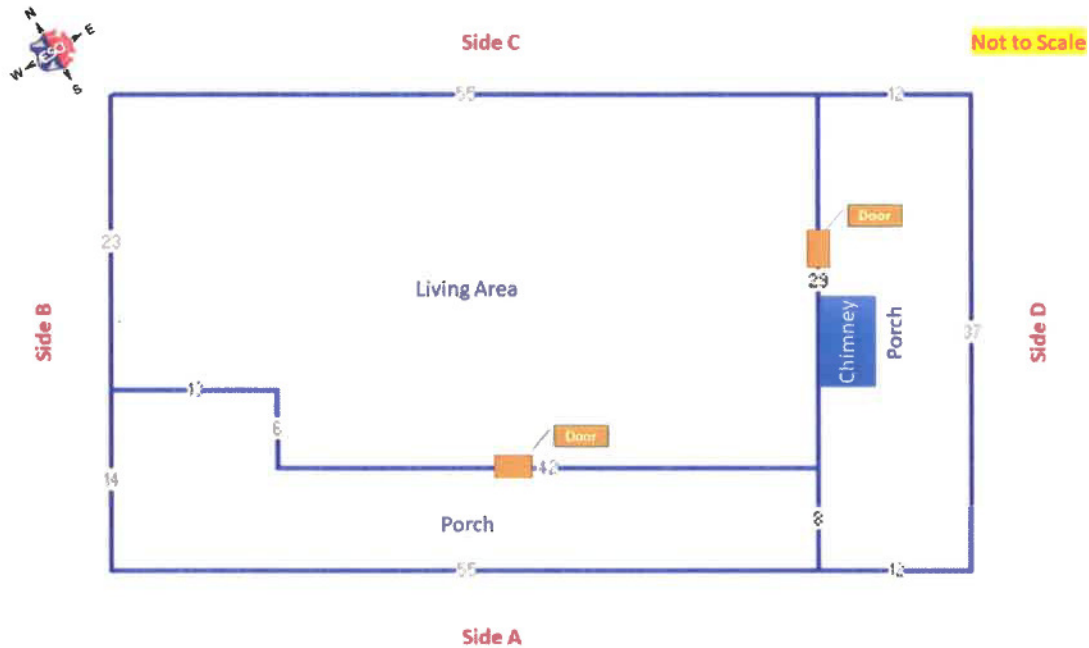
PCFR employs a risk-managed approach to tender response by “dropping” the assigned firefighter (the third of only three crew members) on the fire engine assigned to that fire station to bring the water tender along on a fire response. Splitting up the three-person engine crew severely limits the ability of that initial arriving engine thus staffed in its capabilities until arrival of additional personnel on another apparatus thereby delaying critical tasks. This approach and its success are also dependent upon the engine crew being in the station when the call to respond is made. If not, the next closest station brings their water tender to the scene.

Engine 6 Captain William’s decision to forgo bringing Station 6’s assigned water tender to maintain his crew integrity was a tactically sound approach to putting life safety and preservation as the highest priority. However, due to the rural location of the fire scene and the previously mentioned factors, there was no room for error in anticipating and planning for sufficient water supply which added to the cascading challenges this officer and crew were faced with when they responded to and finally arrived on scene with heavy fire involvement.

Fire Involvement

Radio transmissions and reports from the PCFR units that were first to arrive at [REDACTED] indicated a large amount of flame and smoke coming from the home with fire extension to the trees and understory on the Bravo side of the home as shown in the next figure.

Figure 69: House Layout Showing Sides¹⁶



Subsequent interviews confirmed this report and it was also noted that the initial size up of the Alpha side (front) and Bravo side revealed heavy fire coming from the doors, windows, and eaves of the home. It is understood that the intensity of the flames and heat resulted from the volume of fire from the log structure as well as several trees proximal to the Alpha and Bravo side of the home. The trees that burned actually "crowned," meaning the tops of trees were ignited producing heavy fire volumes and dropping burning branches and limbs.

¹⁶ Source: Polk County Property Appraiser Records

Interviews of those that responded and arrived first suggest that the heaviest concentration of flames was on the Alpha and Bravo sides of the home with heavy smoke issuing from all four sides of the structure. Radio transmission from the Engine 6 officer advised the home was 50 percent involved at 19:25:15. Captain Williams then communicated via radio with the arriving Battalion Chief (Battalion 1) and stated that the structure was neither tenable for an occupant nor for him and his firefighter due to heavy fire involvement and surrounding hazards (downed powerline and trees). Engine 23's (the next arriving engine) officer advised at 19:31:23 that the structure was fully involved. This assessment was confirmed by Battalion Chief 1 who then assumed command from Engine 6's officer and relayed to dispatch that the home was "fully involved."

ESCI is unable to identify the actual cause and origin of the fire without an official determination from the State Fire Marshal's Office. The SFMO was called to the scene of the fire by PCFR to investigate the cause and origin of the fire and to work with the Polk County Sheriff's Office regarding the confirmation of a fatality inside the burned structure. As of this writing, the SFMO report has not yet been released.

Powerline

The power service to [REDACTED] was fed from a feeder line that ran above ground the length of the 300' driveway with a service line to the Alpha-Delta corner to the meter box. The service line burned away and dropped to the ground (still energized) at some point after the arrival of E6. Engine 6 reported the line down at 19:28:28—6 minutes, 20 seconds after arrival. The service line remained energized and was considered a scene hazard inhibiting progression of firefighters to access the Delta side of the home until arrival of Lakeland Electric at 19:34:06—approximately six minutes after E6 reported the downed wire.

Post-Incident Actions of Responders and Department

Fire Rescue

The responding crews remained on scene of this address for a protracted length of time and were eventually relieved and replaced with fresh crews around daybreak. A firefighter's SCBA bottle is rated for 30 minutes of air consumption dependent on workload, physiological make-up of the wearer, and heat exposure. Several firefighters that were interviewed stated they cycled through at least three Self-Contained Breathing Apparatus (SCBA) bottles of air prior to any rest/rehabilitation on scene. The issues that presented difficulty and obstacles to the crew(s) that arrived first, and which resulted in a fire fatality were treated like most other structure fire incidents experienced by Polk County Fire Rescue. Interviews revealed that no Incident Safety Officer was either requested or on scene for this incident. The role of an Incident Safety Officer is to assist the Incident Commander with immediate safety needs as a result of the incident to include the health and safety of the responders.

No post-incident analysis was conducted by the department in order to understand what happened and why, and to develop recommendations to address any short-comings. An effort to look at this incident more closely and determine the facts surrounding the challenges and obstacles faced did not occur until the County Manager was contacted by the Polk County Sheriff who expressed his concern about the incident on November 26, 2018.

Interdepartmental Post Incident Analysis

Experience is the gold standard in the fire service and responding to a wide variety of scenarios increases the breadth and depth of a firefighter's experience and ability to respond appropriately to a wide variety of situations. Although progress is not built on experience alone, a deliberate review of any response drives progress and passes lessons learned on to all personnel in the organization. Analysis of the events before, during, and after all operations is vital to ensuring firefighters are better and more prepared each time they respond.

Every emergency response can hold lessons from which individual responders and the department can expand their respective knowledge base and grow and develop. Implementation of a standardized process for critically examining the outcome of every incident is key to operational success. In general, an after-action review focuses on learning and asks the following five questions:

- What was our mission?
- What went well?
- What could have gone better?
- What might have been done differently?
- What steps are needed to improve future performance?

Lessons learned from an incident not only create a continuous improvement approach to caring for those an organization protects; it also creates learning tools for responders by identifying areas they can improve upon. When implementing an after-action review, where the brutal reality of a loss of life is evident, it is vitally important that the after-action review take into consideration the needs of the family.

By developing a formalized after-action reporting process which focuses on developing lessons that can be incorporated into training and operational doctrine, emergency responders can improve operations and enhance the health and safety of the response community. An after-action review allows emergency responders to identify priorities for improvement, develop a plan for improvement, and obtain administrative and policy support for the plan. During the process, the facilitator and review team should collect multiple viewpoints regarding the incident and actions taken.

The Battalion Chief that responded and was in command of the incident on November 23, 2018, was the officer who completed a PIA at the direction of the acting Operations Chief. There were two versions of this report provided to ESCI—both dated December 6, 2018. One report had a handwritten number "1" on it while the other had a handwritten "2" on it. It was later explained to the ESCI team that version 1 was a "first draft" that was reviewed and required additional information and clarification regarding the incident analysis. Version 2 then became the second working draft and was worked on through February 21, 2019.

Interviews and written statements requested by the assigned officer were conducted well after the incident occurred and much of the information derived for the analysis was a subjective account by the officer who was the Incident Commander at the Rockridge Road fire. No interviews or written statements were requested from the first crew to arrive on scene the evening of November 23, 2018. Subsequent follow-up and written accounts provided post-incident were found to be verbatim accounts that were initially written for the fire reports from the respective responding crews.

PCSO Communications

At the request of the Polk County Florida Sheriff's Office Telecommunications Division, representatives of the International Academies of Emergency Dispatch (IAED) Fire Standards Council reviewed records of the 911 call processing detail of the fire. The purpose of the review was to determine compliance with general 911 industry best practices as well as any applicable agency, local, state, national, and international standards applicable to Fire/Rescue Call-taking/Dispatch.

While the entire executive summary of the review is included in Appendix D, a summary of their findings is below.

Although the outcome of this incident was tragic, after a thorough review of this incident we do not believe there is anything the call-taker could have done differently to change the outcome. The caller's inability to exit the structure, or move around in the structure, or follow the "Trapped in Structure Fire" instructions severely limited what the call-taker could do to assist her. Although the technical processing of this call was not perfect, it was quite good given the extraordinary circumstances that presented themselves. The call-taker should be strongly commended for her empathetic, caring interaction with a caller that would soon be deceased while still on the phone with the call-taker.

The PCSO Bureau of Support Services, Telecommunications Section reviewed and wrote a response to the review of International Academies of Emergency Dispatch (IAED) Fire Council of Standards and Fire/Rescue Special Operations Group Executive Summary. This review is also included in Appendix E of this report.

Media Considerations

Fire Rescue

When an emergency occurs, especially when there is a loss of life or an extreme impact to the community the need to communicate is immediate. An important component of a preparedness program or strategy is a *crisis communications plan*. A fire department must be able to respond promptly, accurately, and confidently during an emergency in the hours and days that follow.

ESCI interviews revealed that there was no contact with the family the night of the fire or in the days following the incident. The department Public Information Officer (PIO) responded to the scene of the fire approximately 40 minutes into the incident, took photos, and sent out a media release in the early hours of November 24, 2018. The distributed release notified the media of the incident and a fatality as a result of the fire. Inquiries into the incident were referred to the State Fire Marshal's Office. Experience demonstrates that organizational leadership often does not understand that in the absence of adequate internal and external communications the outcome is predictable:

- Operational responses will break down.
- Family members, the community, and the media will not know what is happening and quickly become confused, angry, and negatively reactive.
- The organization will be perceived as inept, at best, and negligent, at worst.
- The length of time required to bring full resolution to the issue will be extended, often dramatically.
- The impact to the community's confidence and the reputational bottom line will be more severe.

INCIDENT DISCUSSION

The following discussion is based on the information presented in this report.

Fire Rescue

Selective Fire Rescue units, including first-due Engine 6, were initially pre-alerted of the fire at 19:07:31 by way of CAD pagers followed by the verbal dispatch to the full alarm assignment that began with tones at 19:08:28 and was completed at 19:08:41. The initial first alarm assignment was dispatched as described previously. The assignment consisted of Engine 6, Engine 39, Squad 7, Rescue 6, and Battalions Chiefs 1 and 3. Engine 23, staged on a previous call, heard the incident and alertly—after confirmation with Battalion 1—asked to be assigned to the incident. Medic 6 was clearing the hospital from another call and was enroute almost immediately. These units had previously responded to other calls that day as shown in Figure 70.

Figure 70: Previous Incidents on November 23 for the Units that Responded to the Fire

Number of Previous Responses 11/23/18 08:00 to 19:06				
Unit	Fire	EMS	Other	Total
EN006	1	3	—	4
BC003	1	2	1	4
MR006	—	4	2	6
BC001	1	2	—	3
SQ007	—	4	—	4
EN039	1	3	1	5
EN023	1	4	2	7

The incident was dispatched as a reported structure fire with entrapment of an occupant. Standard operation and protocol for Polk County Fire Rescue in these instances is to respond fire and rescue resources promptly, quickly evaluate the hazards and conditions when they arrive and take an aggressive position to preserve lives and suppress the fire to stop the loss. This approach would be considered a standard expectation and outcome for PCFR.

However, the response time from the Providence Station to this location along with the lack of visible addressing or markers on the main road (Rockridge) began a cascade of events and actions that would not be resolved within a standard outcome model.

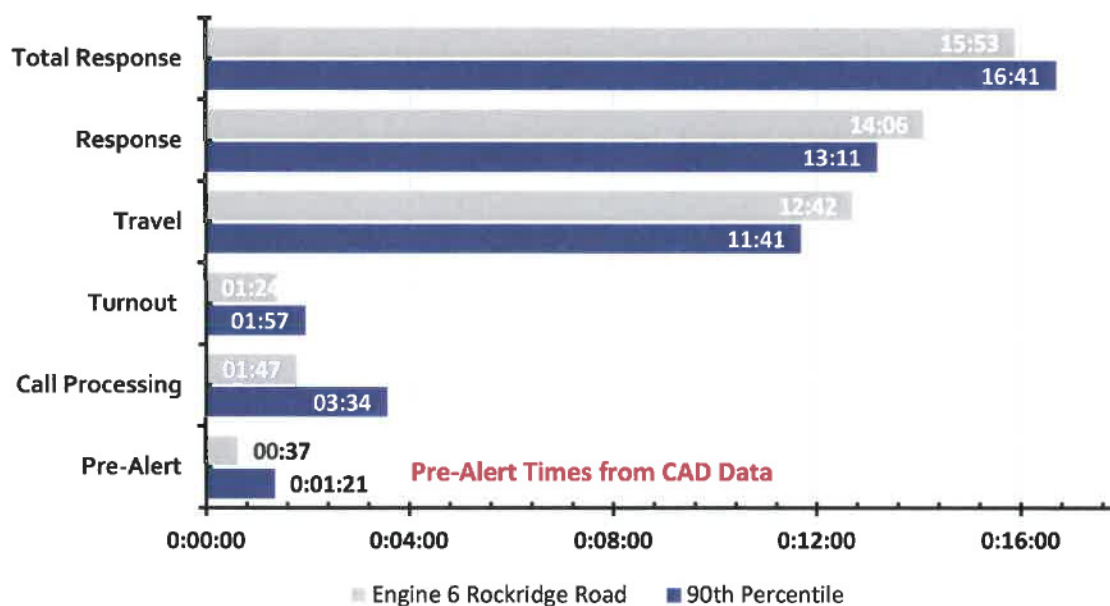
As units reported as responding to the Dispatcher—between 19:09:27 and 19:12:54—the Dispatcher announced over the radio five times that someone was trapped in the structure. Except for Tender 39, all units verbally acknowledged the report when given. The Dispatcher again advised that someone was trapped at 19:25:30 which was acknowledged by E6. It was not until after Engine 6's arrival and upon questioning by BC 1 that dispatch reported that, "Command, we are still landline there is somebody inside the structure," and noted the location as the kitchen. This was at 19:30:29, approximately 03:19 after the last contact with the victim on the phone.

Engine 6, the first due and first arriving engine, reported on-scene (actually located at the driveway entrance 300' from the structure) at 19:22:47 with a response time of 0:14:06; 15 minutes, 58 seconds after the call-taker first answered the 911 call at the communications center. The Engine 6 crew were unable to locate any markers or mailboxes identifying which unpaved trail was the location of the fire address. Engine 23's officer directly communicated with Engine 6 and relayed that he thought it may be the last road before the bridge on Rockridge Road. It turns out the Engine 6 officer made the correct decision by taking the first dirt road they came to on arrival and by doing so encountered smoke and ultimately visual fire through the heavy tree cover at the end of the homeowner's 300' driveway leading to the home. Unfortunately, Captain Williams did not communicate back to Engine 23 or the other responding crews that the dirt trail leading to the involved home and driveway was in fact the second trail prior to the bridge from Engine 6's direction of travel. Consequently, the next arriving units, Squad 7 and Battalion Chief 1 traveled traveling from the opposite took the last dirt road after the bridge, ending up at a dead end and had to turn their vehicles around, delaying their arrival to the fire scene.

Based on previous response performance in the County as analyzed earlier in this report and the predicted travel times to this location along with the accessibility issues encountered, the actual response times for responding units seems expected and within normal range for PCFR given its current resource level and distribution.

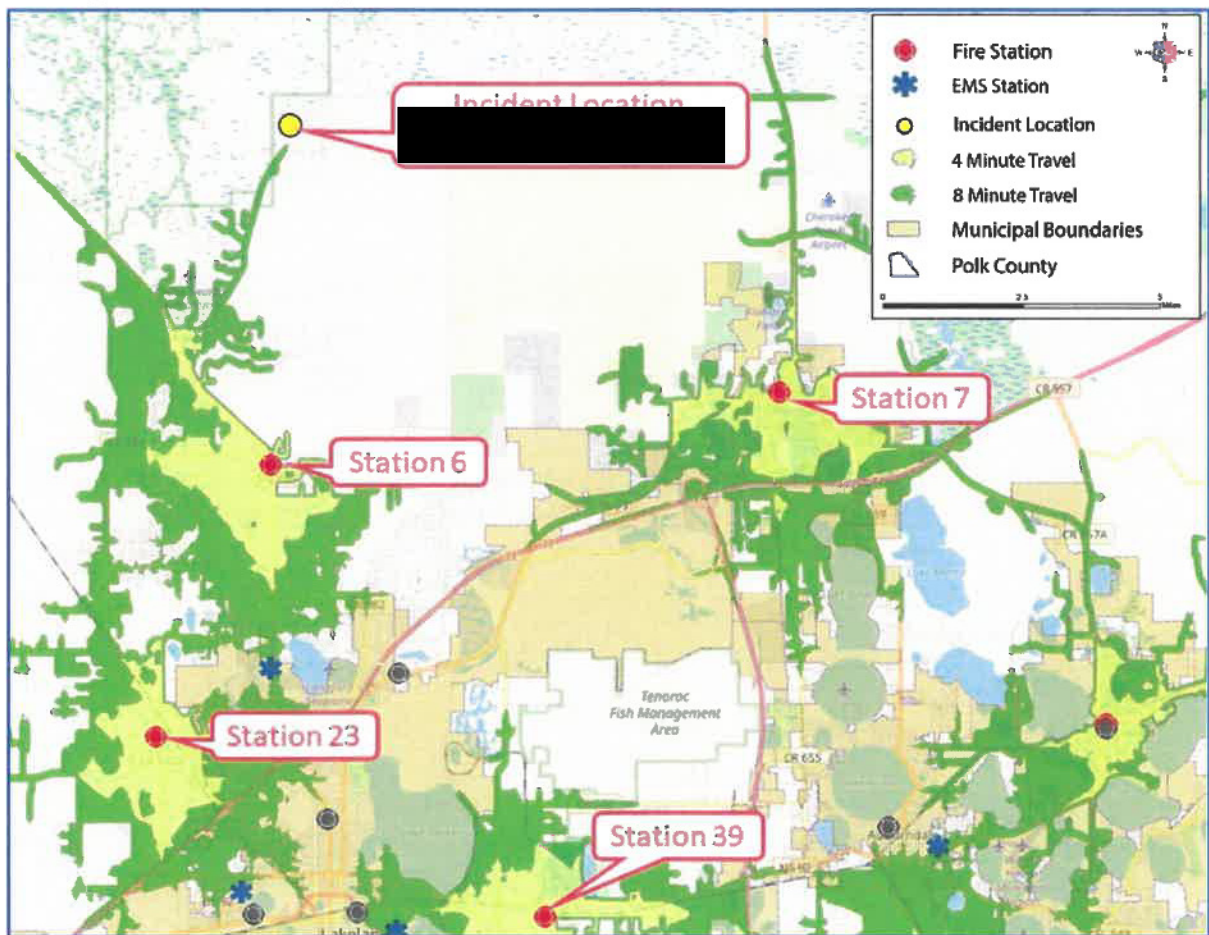
A comparison was made between the performance of the first due engine—Engine 6—and the Polk County historical performance at the 90th percentile countywide as analyzed by ESCI. The next figure summarizes this comparison.

**Figure 71: PCFR Historical Performance in Relation to Engine 6 for [REDACTED]
from PCFR RMS Data**



As can be derived from the figure, the overall response performance to the Rockridge Road fire was better than the 90th percentile PCFR total response performance for fires. While the travel time, and therefore the response time, exceeded 90th percentile performance—call processing and turnout time were less.

Figure 72: Four- and Eight-Minute Predicted Travel Time in Relation to the Incident Location



As the house was in a heavily wooded area, visualization of the extent and progression of the fire for the initial size up report was difficult. E6 initially reported heavy smoke as they reported on scene followed by a report of heavy flames and smoke at 19:23:16 once the officer walked the approximate 300' up the driveway to the front of the home. They reported 50 percent involvement two minutes later.

Like all other fire officers—responding to low frequency high risk events—the E6 officer had to rapidly perform a situational evaluation or size-up and make a determination as to the best strategy based on the information available and relying on his training and experience level. PCFR utilizes the Blue Card System.¹⁷ Within this system, the Command Function situational evaluation includes the Strategic Decision-Making Model illustrated in the next figure.

Figure 73: Strategic Decision-Making Model¹⁸



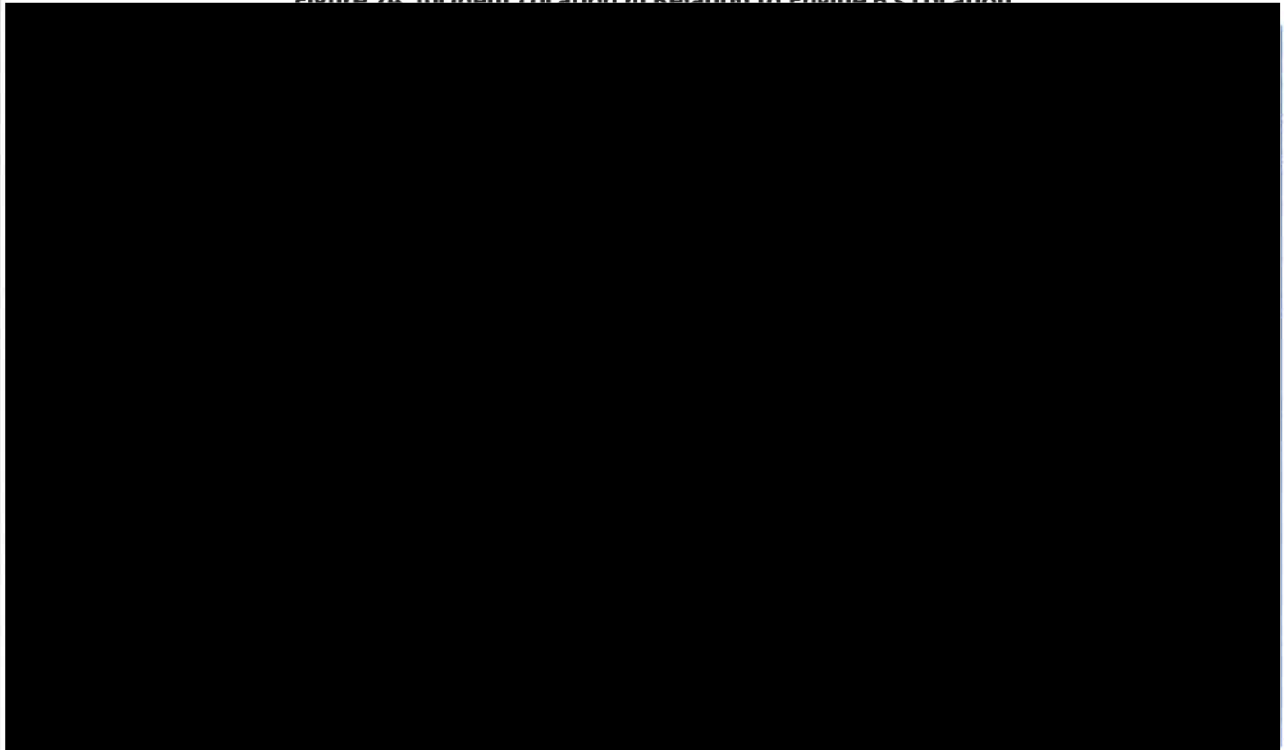
Additionally, the Blue Card System recognizes that an Incident Commander uses a combination of the following four basic information forms to help manage and process information on the emergency scene:

- Previous experience
- Visual information
- Reported info/reconnaissance
- Pre-incident planning and familiarity

In this case, the initial arriving officer was relatively new in his position with limited experience, and likely had not been faced with an incident like this before. The visual information was limited upon initial arrival, however, once up the driveway, the Alpha side of the house would have been completely visible as shown in the following figures.

¹⁷ http://bshifter.com/bcmd_programoverview.aspx

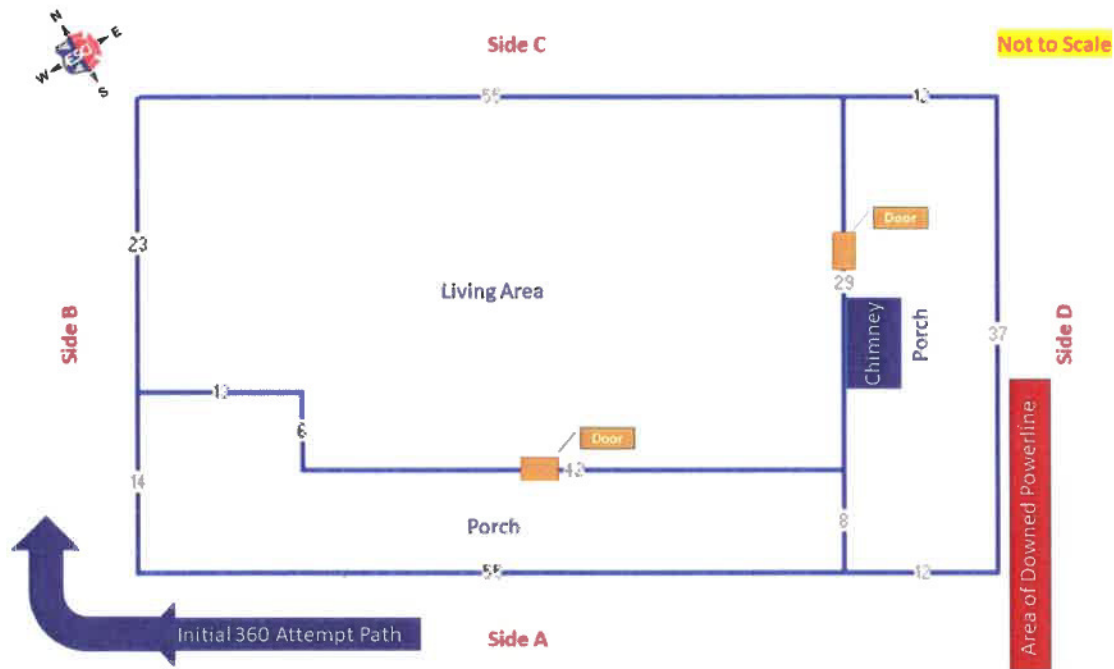
¹⁸ Adapted from Blue Card SOP: <http://bshifterlibrary.blob.core.windows.net/pdfs/BlueCardSOP.pdf>

Figure 74: Incident Location in Relation to Engine 6's Location

The E6 Captain reported that after arrival and traveling by foot down the driveway to the front of the home he and his firefighter attempted to do a 360° survey (meaning a complete walk around the structure moving either right or left from a starting point to determine hazards, etc.) that started on the Alpha side and progressed to the Bravo side where there was heavy fire involvement. The house is among trees that were burning which made it difficult to get to the Charlie side. The officer's focus on the involved side of the home thwarted his attempt to make a 360° walk around the home to ascertain more about the progression of fire, survivable space entry, or egress points and other hazards as is standard protocol.

Captain Williams considered making his way around the house moving to his right towards the Alpha/Delta side but then advised there was a power line down on the Alpha/Delta side of the structure. The power line was live which would have caused Williams to move further into the woods to go around the power pole and then back towards the Delta side. Captain Williams did not attempt to do so.

Figure 75: Floor Plan with Locations



In discussion with both the first arriving officer and his firefighter, their visual impression was that the fire potentially was in the attic—and from their limited vantage point that the house was fully involved from the Alpha side when in fact we know now that for approximately 5 minutes after arrival there was a survivable space in the dining room and kitchen area which was on the Charlie-Delta corner. A 360° survey, if accomplished, would have revealed this.

The initial size-up by Captain Williams stated that the engine and crew were on scene of a large residential structure, smoke and flames showing, and he was going to be setting up a courtyard lay for his water supply to attack the fire. The actions and radio transmissions of Captain Williams focused on the large body of fire coming from the Alpha/Bravo side of the structure and the heavy woods as a potential exposure. Captain Williams was then advised by dispatch at 19:25:30 that someone was “trapped” inside the structure. Captain Williams acknowledged hearing this radio transmission.

Captain Williams radioed at 19:25:36 that he needed the next PCFR unit arriving on scene to come straight to the house with their crew to address "Two-in/Two-out" to possibly enter the structure. In firefighting operations, the policy of two-in, two-out refers to United States Occupational Safety and Health Administration (OSHA) policy 29 CFR 1910.134(g)(4)(i) that mandates that firefighters never go into a dangerous situation in a fire or rescue incident alone. This requirement has also been adopted by the State of Florida and is mandated for all fire departments in the State. Further, the requirement states that there be two firefighters outside the hazard area who are not committed to any other operation and are standing by to initiate a rescue of the firefighters inside, should they become in trouble.

An exception to this OSHA mandate exists during the initial stages of the incident where only one crew is operating in the hazard area.

The exception has also been adopted by the State of Florida and is described in PCFR's Operational Policy 614; Two-In/Two-Out Firefighter Rescue. The exception to the requirement for two firefighters uncommitted outside with firefighters inside a structure fire is that a firefighting crew with a minimum of two personnel, exercising reasonable prudence under the circumstances shall not be prohibited from making a rescue in an imminent life-threatening situation. In other words, an initial arriving crew with two firefighters may make a rescue attempt if they know there is an imminent threat and they believe that they can perform a rescue.

The lack of an initial 360° survey by the officer of E6 made the reconnaissance ineffective. The information gathered by the Call-Taker was very good and the Call-Taker maintained communication with the caller from the time the call was initiated until contact was lost 20 minutes into the incident.

It is unknown if pre-incident planning was available for the area, however, it is known that the Captains on E6 and E23 know the area as it was the officer on E23 who directly communicated with both E6's officer and Battalion 1 where he thought the dirt trail and home were located.

Based on the timeline, radio communication logs, and discussion with responders, there was no indication that the E6 crew was either focused on or in a mode to perform a search and rescue after the initial size-up as described. The body of fire, its rapid progression, and the powerline down contributed to Captain William's tunnel vision, resulting in his focus on only one part of the situation rather than maintaining full situational awareness. Neither Captain Williams nor his firefighter brought forcible entry tools, a Thermal Imaging Camera (TIC), or a pressurized water extinguisher to the structure to assist them with an entry or search to execute a victim rescue. The E6 Captain called for a courtyard lay and a defensive attack mode at 19:23:16—less than two minutes after stating they were on scene and just under four minutes from when contact with the victim was finally lost.

The victim was found near the door on the Delta side as shown in the previous figure. This door would have been hidden behind the chimney from the initial arriving crew when standing in front of the Alpha-side of the home. If the 360° survey could have been completed going from Alpha to Bravo, Charlie, and then Delta or if initially on arrival Engine 6 went right first to Delta, Charlie, Bravo, Alpha for the 360° survey prior to the powerline failure, that door would have likely been seen and that would appear to be the only survivable space during the five minutes from the units arrival at the driveway until contact was lost with the victim.

After the initial actions and contact was lost with the caller, the incident was handled as a defensive fire in an area without hydrants and the thick woods as exposures.

The same crews that initially responded remained on the scene through the incident; a period of over nine hours for the initial units.

PCSO Communications

After reviewing the incident from the Emergency Communication Center perspective there were two key positions responsible for the handling of this incident.

The first was the Call-Taker who handled the 911 call from the caller who happened to be a first-party caller as she was inside the home. The call lasted for 20 minutes, 31 seconds. The Call-Taker maintained contact with the caller providing pre-arrival and post-dispatch instructions, gathering information, and putting that information into the CAD system as notes.

The critical timeline in terms of this incident began at 19:06:49 when the Call-Taker answered the original 911 call and just approximately 5 seconds later when it was entered into the computer. The Call-Taker maintained contact with the caller until 19:27:10 when the caller advised she was on fire and there were two touch tone sounds. There was no further contact with the caller for the next 9 minutes, 20 seconds even though there were many attempts to illicit a response from the caller. These attempts were followed by the caller's phone disconnecting at 19:35:56.

The Call-Taker, through her pre-arrival and post-dispatch instructions and questioning of the caller, elicited some very valuable information. This information was typed into the CAD system and appeared under the info tab. Some of this information included the location of the victim, the possible location of the fire on the roof, and the victim's condition. The Call-Taker did advise the caller to exit the building if it was safe to do so, but there was never any sense of urgency or authority.

The second position was the Dispatcher who received the call from the Call-Taker via the CAD, sent the initial page and then communicated with the fire department units as they were enroute, responding, and on scene until the incident was closed at 12:52:14 the next day. The same information that was typed into the CAD system that was received by the 911 call taking position would have been visible not only to the fire department units responding with a working computer but also the Dispatcher who was maintaining communication with the fire department units at dispatch, enroute, on scene, and until completion of the call.

The Dispatcher did relay information after initial dispatch to the responding units that someone was trapped in the fire, although there appears to be a disconnect as it was not ever clear that the caller and the person trapped were one in the same. There was a great deal of valuable information put into the computer through the note system about the patient's condition and location in the house, doorways, and possible location of the fire that was never verbally relayed to the responding units. Although the information was put in the computer and would have come up on notes for firefighters responding if they were monitoring those notes, the first arriving unit (E6) did not have a working computer that day and had no access to that information. Once E6 and the other units were on scene, they would not have seen some of this valuable information unless it was relayed verbally over the radio.

SECTION III:

LESSONS LEARNED/RECOMMENDATIONS

INTRODUCTION TO LESSONS LEARNED/RECOMMENDATIONS

In this section—the ESCI team provides a discussion of the lessons learned from this incident for both the Polk County Fire Rescue department and the fire service in general. The results of any PIA should focus on a goal of improving how the service prepares for and responds to emergency incidents. Recommendations for improvements in departmental policies, procedures, and practices are summarized in this section.

LESSONS LEARNED AND RECOMMENDATIONS

Lessons Learned and Recommendations

The following section describes not only lessons learned from the Rockridge Road incident—but also key findings from the study overall. Regardless of the sources, these are identified as key findings in the section below. With each key finding there are one or more recommendations developed by the ESCI team.

It should be noted that ESCI recognizes the current staffing situation that exists in Polk County Fire Rescue, both at the entry level and upward through the ranks. There are recommendations that require the scheduling of additional personnel. ESCI is sensitive to the fact that implementing some of these types of recommendations in the short-term would only exacerbate the mandatory overtime problem. Therefore, it is suggested that PCFR prioritize these and implement them over the longer term as the staffing issues are resolved.

The recommendations are divided into two categories: fire rescue only or PCSO communications and fire rescue—depending on the subject of the recommendation.

Key Finding 1

Information provided by the caller(s) about an incident scene or patient status is vitally important to the units assigned to that incident. In this incident, the caller provided considerable information about the structure, her location within the structure, her condition, and access points to enter the structure. These information points were put into the CAD and showed up on the mobile computers. In this case, the first arriving unit had a computer that was out of service and none of this information would have been available to the crew of E6. Although not required by protocol, it was noted that many of these information points were never communicated verbally on the radio to the responding units or to the units that were on scene and away from their computers.

RECOMMENDATIONS:

- Empower the existing joint PCSO/PCFR steering committee to review and develop guidelines for the verbal communication of *vital incident information* to responding crews.
- Verbalize critical information provided by the caller through the CAD to the units in the field responding to incidents as agreed upon through the joint steering committee.
- Ensure a redundancy policy when critical information is provided by Dispatch.

AGENCY: FIRE RESCUE AND PCSO COMMUNICATIONS

Key Finding 2

During the interviews, some officers that responded to the incident reported seeing the notes in the CAD and wished that they had gotten on the radio to ensure that the other responding units understood what feedback was coming from the caller. None of the responders took that action to call other responding units.

RECOMMENDATION:

- All responders regardless of rank or position should be empowered to say something if they see or hear something critical to the incident. This communication ensures that each responder maximizes their situational awareness and that of units already on scene.

AGENCY: FIRE RESCUE**Key Finding 3**

ESCI interviewed fire officers of various ranks and divisions within PCFR. It was apparent from these interviews that a majority of these officers are concerned with officer training, mentoring, and development of the existing officer cadre as well as the newly promoted and those aspiring for promotion to the rank. Coaching, mentoring, and performance matters are handled differently throughout the organization. Those that spoke to addressing poor or sub-par performance of subordinate and probationary personnel indicated that performance issues were generally handled verbally and when documented in a more formalized way it was disciplinary in nature. Illustration or follow-up to create a path to success for the sub-par performer was non-existent. Most interviewed related that addressing sub-par performance is perceived as conflict and is inconsistent, so it is avoided.

RECOMMENDATION:

- PCFR should develop and implement ongoing officer development and leadership training:
 - Utilize operational and tactical policies and procedures, using simulation where possible to enhance decision-making skills.
 - Coordinate training with human resource professionals to address performance evaluations to create a culture of success for the evaluator and those that receive them.
 - Facilitate programs for fire officers that address leadership, performance coaching, mentoring, and constructive confrontation of difficult conversations.
 - Utilize training academies such as State Fire College, National Fire Academy to develop Company and Chief Officers on leadership, strategies/tactics, communications, and interpersonal development.
- This ongoing program should be designed to have the participant meet the Fire Officer requirements found in NFPA 1021: *Standard for Fire Officer Professional Qualifications*.

AGENCY: FIRE RESCUE

Key Finding 4

Based on the timeline, radio communication logs, and discussion with responders, there was no indication that E6 was in a mode to perform a search and rescue after arrival and initial size-up. The officer and firefighter reported that they did not take any tools or other firefighting equipment with them to the scene. This may further imply the crew was not in a search and rescue mode.

The officer that was first to arrive at the Rockridge Road fire gave his crew of two personnel instructions to establish a water supply down the 300' driveway (Courtyard Lay) to address fire extinguishment and a way to be resupplied by incoming resources. However, the officer and crew confirmed that no resources or tools were deployed by the officer and firefighter to the burning structure to forcibly access or execute a rescue if needed. The mission of any fire department is protecting and saving lives. All firefighting and rescue tactics require mastery of basic skills. Therefore, it is about knowing the skills and realizing the importance of isolating the fire area and/or victims. Modern fire growth is measured in seconds, not minutes.

RECOMMENDATIONS:

- PCFR must emphasize through training and operational procedures what minimum equipment always comes off the apparatus with the crew based on the incident situation.
- Utilize current operational and tactical policies and procedures, using simulation where possible to enhance decision-making skills.
- Utilize current available training facilities to develop scenarios for crews to enhance skills and timing relating to vent, enter, isolate, search (VEIS) operations.

AGENCY: FIRE RESCUE**Key Finding 5**

The use of the Pre-Alert Paging process adds value in reducing total response time if employed to its fullest potential.

Currently there is not consensus between the PCFR and PSCO ECC as to what stops the clock for dispatch call processing time. If call entry and the sending of the Pre-Alert Page to select units stops the clock, the call processing performance for this call was 37 seconds, well under the NFPA standards of 60 seconds.

If the call processing time performance is measured at the time when the full first alarm assignment has been verbally dispatched over the radio—as recorded in the RMS data provided by PCFR—the call processing time for this call was 1 minute, 47 seconds. This would then exceed the 60 seconds called for in NFPA 1710 and NFPA 1221.

Additionally, as part of the performance evaluation, time stamps were not available that allowed for a measurement of alarm handling time in the PCFR RMS data. Specifically, from the time the 911 call is answered until the call is created. Although this was reported through the PCSO strategic plan provided.

RECOMMENDATION:

- The use of the Pre-Alert Page should be expanded to include the entire first alarm assignment beginning with the full first alarm assignment as opposed to notification—informational—pages for staff or other members.
- PCFR and PCSO form a joint work group of users and service providers to examine and agree on total response time definitions and what actions stop the clock at each measurement based on published standards.
- Where performance is found to be less than the standards or best practices examine underlying causes of this performance and seek out best practices that may be helpful in achieving improvements.
- PCFR to work with PCSO communications to develop and institute a process to incorporate all the applicable and available time stamps into the PCFR RMS.

AGENCY: FIRE RESCUE AND PCSO COMMUNICATIONS**Key Finding 6**

ESCI interviews revealed that there was no contact with the family at the conclusion of the fire and in the days following the incident. It is essential that communication with the homeowner and family members following the loss of life and property loss is established through the incident commander to an assigned department member such as a staff officer or public information officer. PCFR Standard Operating Policy #107 states, "To operate effectively, PCFR must obtain the support of the public they serve. By providing the news media and the community with information on agency administration and operations, the agency hopes to foster a relationship of mutual trust, cooperation and respect. It further states that the PIO shall be notified on all significant incidents occurring within the response area of Polk County Fire Rescue which involve large dollar loss, injury, or death will have a high probability of interest to the media and the PIO shall be notified.

RECOMMENDATIONS:

- As soon as practical, the Incident Commander should make all information pertaining to the incident available to the PIO (status update; who, what where, when, and why)
- The PIO should work with all media representatives and other outside agencies requiring information and data on the incident.
- Assign the PIO or a staff officer to communicate with the homeowner to provide updates to include assistance in their time of need
- Consider joint training and exercises with Polk County government public information staff and local law enforcement to exercise each agency's respective communication plan and develop a joint information component when incidents that affect each agency as well as the community occurs.
- Develop a crisis communications plan that can be utilized and facilitated before, during and after crisis situations within the agency; and
- Review existing PCFR and Polk County government policies that address public information roles and responsibilities and crisis communications.

- Review current communications policies with Polk County legal and with all PCFR leadership and company officers to emphasize the importance of coordinating and authorizing the release of certain information concerning confidential agency investigations and operations.
- Assign an officer or staff member to address these needs as a liaison to persons effected by loss of life or property. PCFR's existing *After the Fire Brochure* should be used as a guideline and tool to start the discussion.

AGENCY: FIRE RESCUE

Key Finding 7

The turnout time performance at the 90th percentile overall is 2 minutes, 15 seconds. This is over twice the recommendation of 60 seconds found in NFPA standard 1710. While the other components of total response time are out of the control of the fire department, turnout time is the one component that the department and its members can control. Turnout time is an important piece—controllable—of total response performance and can be influenced by factors such as station design, apparatus staffing, and the performance of the assigned personnel.

RECOMMENDATIONS:

- PCFR should track and publish department-wide turnout performance.
- PCFR should seek feedback from the members on ways to improve turnout times.
- Turnout time, travel through the station to the apparatus needs to be a consideration in future station designs including remodeling.

AGENCY: FIRE RESCUE

Key Finding 8

Because of the location of the incident, the availability of water resources was limited. Although there is a hydrants layer available in the County GIS system, a verbalization of the closest two or three water resources (hydrants or wells) would have assisted in a quicker location of these resources.

RECOMMENDATIONS:

- Complete pre-fire plans on target hazards and special risk areas (hard to access, no water supply, etc.) and conduct appropriate training on the plans.
- Reassess run card system to automatically dispatch a tender as part of the initial first alarm assignment—not at officers' discretion and not from the first due station.
- Non-Hydranted areas should be preplanned for tender fill up locations. As the distance from the incident location increases the number of tenders on the response should increase.
- E-911 Communications Operators should verbalize hydrant locations to all units while responding.

AGENCY: FIRE RESCUE AND PCSO COMMUNICATIONS

Key Finding 9

It was identified by the units responding that the home address was not displayed on the main road leading to the incident. Because of this, there was a delay in locating and arriving at the incident location. The County does have an addressing ordinance (Ordinance 04-89) that deals with this issue.

RECOMMENDATIONS:

- Public education campaign or Public Service Announcement on the importance of following the County Ordinance on posting of addresses.
- Cutting back trees for better visibility.
- Wildland/urban interface program adoption through Florida Forestry Service.

AGENCY: FIRE RESCUE AND PCSO COMMUNICATIONS**Key Finding 10**

The incident was entered in to the CAD and dispatched as a 69Eo6 residential structure fire calling for a response of two engines, a squad, a rescue, and two Battalion Chiefs, for a total response of 12 personnel as the squad was short one member. This is less than the NFPA 1710 requirement for an effective response force. Additionally, according to the response matrix provided to ESCI a 69Eo6 calls for a response of three engines, a squad, a heavy rescue, a rescue, and one Battalion Chief for a total of 18 personnel. While not dispatched initially, by adding themselves to the incident PCFR brought the number of engines to the expected number of three.

At 19:08:54 the suffix R (person trapped) was added to the determinate. Base on the response matrix an additional engine should have been added at that time, bringing the total responders to 21.

RECOMMENDATIONS:

- Based on a risk assessment—periodically review and update the response matrix.
- Ensure that the CAD software can recommend the appropriate assignment based not only on the initial determinant but also on changes.
- Train the ECC staff on the response matrix and the importance of ensuring the correct response to incidents.

AGENCY: FIRE RESCUE AND PCSO COMMUNICATIONS

Key Finding 11

Although there are morning conference calls, communicating in a timely manner to 44 stations is challenging. ESCI found that some of the members interviewed were unaware of any post-incident analysis process and that one had been engaged by PCFR staff.

RECOMMENDATIONS:

- Research digital media platforms that could be placed in all fire stations that can be updated periodically and in real-time to increase information exchange, direction, and progress, performance, daily fire weather, hospital statuses, and other information.
- Work with internal information technology resources to utilize “live” broadcast from fire chief and other members to convey important organizational messages.
- Develop a monthly news bulletin.

AGENCY: FIRE RESCUE**Key Finding 12**

The Battalion Chief that responded and was in command of the incident on November 23, 2018, was the officer who completed a PIA at the direction of the Acting Operations Chief. It was pointed out during the interviews conducted by ESCI that not all members that operated on the scene were interviewed for the PIA—including the first arriving officer.

It was also determined that while each agency involved in this incident did in fact do some sort of post incident analysis or after-action review there is no indication that a joint process was undertaken.

RECOMMENDATION:

- PCFR should develop a comprehensive PIA policy based on standards and best practices. At minimum the policy should address:
 - What incidents will require the PIA process?
 - Post-event time frame for the scheduling of the PIA?
 - How will the PIA be conducted? And by whom?
 - What participants will be involved in the process?
 - Were or are there logistical preparations needed?
 - What documentation and information is required?
 - What are the expectations of the process?
 - Developing the Final Report—common format?
 - How will the report be distributed to the rest of the department?
- NFPA 1500 requirements related to the PIA process.
 - 8.11.1 The fire department shall establish requirements and standard operating procedures for a standardized post-incident analysis of significant incidents or those that involve serious injury or death to a fire fighter.

- 8.11.2 The fire department incident safety officer shall be involved in the post-incident analysis as defined in NFPA 1521.
- 8.11.3 The analysis shall conduct a basic review of the conditions present, the actions taken, and the effect of the conditions and actions on the safety and health of members.
- 8.11.4 The analysis shall identify any action necessary to change or update any safety, health, and wellness program elements to improve the welfare of members.
- 8.11.5 The analysis process shall include a standardized action plan for such necessary changes.
- 8.11.5.1 The action plan shall include the change needed and the responsibilities, dates, and details of such actions.
- A more formalized and adopted process is needed for PCFR to create triggers for fire officers to know when to execute a PIA.
- Training and awareness for all PCFR fire personal on the process and the outcomes as a result of a PIA.
- PCFR and PCSO should participate together in PIAs that are a result of incidents that both agencies were involved in.

AGENCY: FIRE RESCUE AND PCSO COMMUNICATIONS

Key Finding 13

In review of the incident response and subsequent reports, it was recognized that Squad 7 was staffed with only two members at the time of this incident. It was explained that a member from the ambulance at Station 7 had to leave during the day unexpectedly. This required the third member from Squad 7 to move over to the ambulance for the balance of the shift. It is not clear if attempts were made to fill the vacant position prior to the fire response.

RECOMMENDATION:

- It is understood that with some of the current staffing challenges facing the department that some engines will be staffed with two personnel. The recommendation is that the Squads get priority for three-person staffing as they are responsible not only for firefighting operations but also special operations such as technical rescue incidents.
- It is further recommended that minimum engine staffing be set at three as soon as practical.

AGENCY: FIRE RESCUE

Key Finding 14

As the staff for critical tasking is related to the EFD response matrix—when units respond with less than normal or expected staffing, operations can be adversely affected.

RECOMMENDATIONS:

- When units respond to high acuity events and are understaffed, additional units should be assigned automatically to ensure the expected number of personnel arrive on scene.
- Use of Mutual or Automatic Aid can assist with the response matrix.

AGENCY: FIRE RESCUE

Key Finding 15

An evaluation of PCFR's departmental policies and guidelines appear thorough and relevant to a fire rescue organization of its size and scope. However, when incidents such as a fatal fire occur and there are questions and various interpretations from internal stakeholders and the community regarding water tender/shuttle operations, tactical procedures such as Two-in/Two-out, etc., this should cause the department to look at an operational safety "stand down" or at a minimum a review of current policies and procedures to make sure they are clear, concise, and adhered to.

RECOMMENDATION:

- Review operational policies with a committee of operational officers, D/E, senior FF, staff representative, and labor representative to update, challenge, enhance, or delete any procedures, verbiage, or policy that requires attention from a consensus standpoint.

AGENCY: FIRE RESCUE

Key Finding 16

Consistency of instruction is an important aspect of a departmental training program; it is essential that firefighters and officers receive clear, concise, and unambiguous instruction on fire strategies, tactics, and safety. To that end, it is highly recommended that all Polk County Fire Rescue training be based on consistent lesson plans, with clear goals, objectives, and learning outcomes.

RECOMMENDATIONS:

- Provide adequate staffing and consistency within the Training Division to create short and long-term training goals and programs.
- PCFR should consider developing a Training Advisory Committee, including a diverse representation from various ranks, stations, and subject matter experts. This group can be very effective in identifying training needs as well as recommending relevant strategies to meet departmental, shift, company, and individual needs.
- Expand on the training plan to create a department training manual.
- Review and update all positional task books to establish department standards and expectations.
- Include safety practices and Standard Operating Guidelines in ongoing training.
- Ensure that all Battalion Chiefs and Training Captains have completed Safety Officer training and are State certified.
- Establish annual training on radio communications procedures.

AGENCY: FIRE RESCUE**Key Finding 17**

ESCI interviews revealed that there are several open and pending firefighter positions as a result of turnover resulting in vacant position openings and mandatory overtime assignments for incumbent members. Polk County Human Resources Division has a specialist assigned to PCFR though the rate of turnover and the application and vetting process are not meeting expectations.

RECOMMENDATIONS:

- Evaluate a plan to hire firefighter personnel and train them in-house (recruit academy).
- Create a senior fire officer position in fire department administration that would focus on human resources and personnel functions. This one person would function as the fire departments liaison to county human resources. A sample position description can be found in Appendix I. Assemble representatives from both PCFR and Polk County HR to relook at recruitment, hiring, and onboarding to create an efficient and realistic expectation and process for all stakeholders.

AGENCY: FIRE RESCUE

Key Finding 18

While the personnel assigned to the PCSO ECC are highly trained and hold numerous certifications in their field for the difficult jobs they are asked to do they do not—and do not need to—have any fire/EMS service background. There is value during day-to-day operations and during complex events to have an experienced fire officer with a strong operational background in fire and EMS available to assist.

RECOMMENDATION:

- Assign a PCFR Captain or Battalion Chief (preferred) to serve as a Fire Operations Officer (FOO) assigned to PCSO ECC. The roles of this position can be developed in consultation between PCFR and PCSO stake holders but may include:
 - Coordination with the Staffing Officer to oversee the department's daily staffing needs and balancing of personnel.
 - Quality Assurance review of reports.
 - Authorizing out-of-service units.
 - Implementation of alternate dispatch protocols.
 - Daily intervention with the media and other agencies (i.e., PCSO, hospitals, as well as the public).
 - Provide effective oversight and operational guidance during large scale, high acuity, and specialized incidents.
 - Ensure that Chaplains and CISM, peer support teams are utilized.
 - Assist field operations officers with maintenance of overall situational awareness.

AGENCY: FIRE RESCUE AND PCSO COMMUNICATIONS**Key Finding 19**

PCFR's rapid growth and high turnover rate presents a challenge to identify experienced internal candidates that are seeking to and are experienced enough to move into the Company Officer ranks.

RECOMMENDATIONS:

- PCFR should develop or contract for an Officer Academy for officer candidates and those promoted within their first year.
- Develop a comprehensive task book to be completed during the training phase of Company Officer training.
- Develop a program and culture that encourages experienced and tenured officers to coach and mentor newly promoted Officers.

AGENCY: FIRE RESCUE

Key Finding 20

PCFR depends on personnel staffed and assigned to existing engines, ladders, and/or rescue companies to drop a person from that standard resource to bring a water tender that is assigned to their fire station. This can create a delay in response especially if the crew is out of the station and returning or clearing another call.

RECOMMENDATIONS:

- Reassess and redistribute tenders countywide with a long-term goal of consistent specifications for purchase.
- Re-evaluate locations of water tenders to ensure adequate coverage in areas that have no fire hydrants.
- Evaluate the design of a more rural-type of fire apparatus that will keep crew integrity intact as well as offer more onboard water and a design specification for accessibility in remote locations.

AGENCY: FIRE RESCUE**Key Finding 21**

As technology use increases so does the reliance on the technology. During the interviews ESCI gathered information that computer mounting hardware varies in different units based on the computer type. This leads to issues related to the securing of the computer in the vehicle as well as charging. It was noted that chargers were not readily available when switching to reserve apparatus and had to be borrowed from the fleet department when switching into reserve apparatus. It was reported by several officers interviewed that the current condition with reserves creates a necessity for officers and crews to "engineer" ways to keep this critical piece of hardware running. For example, pulling the computer out of the apparatus at the station to connect it to a 110 v source to charge or running a 110 v extension cord into the apparatus when in quarters to maintain a fully charged battery.

RECOMMENDATIONS:

- Future computer purchases should ensure a consistent model to the extent possible.
- Assess all apparatus to make sure computer/mounting and charging is available for the type of computers in the system. When mounting and charging hardware a matching computer should be assigned to that reserve unit.

AGENCY: FIRE RESCUE

Key Finding 22

Interviews and incident record review revealed that no Incident Safety Officer was requested or on scene for this incident. The role of an Incident Safety Officer is to assist the Incident Commander with immediate safety needs as a result of the incident to include the health and safety of the responders.

RECOMMENDATIONS:

- Develop a list of the types of incidents that a Safety Officer should respond to.
 - NFPA 1561: *Standard on Emergency Services Incident Management System and Command Safety* section 5.9.6.2 requires that SOPs define the criteria for the response or appointment of a Safety Officer.
- Add the Safety Officer to the response matrix to ensure a Safety Officer is dispatched to the incidents identified above.
- PCFR must adopt and implement a comprehensive respiratory protection program that complies with OSHA regulations and NFPA standards to include an Air Management Policy.

AGENCY: FIRE RESCUE**Key Finding 23**

Based on feedback from units in the field, there may be a lack of understanding of the roles and responsibilities of field units and the Communication Center.

RECOMMENDATIONS:

- Ride along training for Fire field Supervisors in the Communications Center and the same for Supervisors and staff in the Communications Center to better understand each other's duties and responsibilities.
- Establish a working group or committee with representation from the field level to assist PCSO and PCFR staff members to better understand the needs and gaps of those communicating from the field and the dispatch console.

AGENCY: FIRE RESCUE AND PCSO COMMUNICATIONS**Key Finding 24**

ESCI considers the need for a quality training facility to be a high priority for Polk County Fire Rescue and recommends that it consider working or partnering with neighboring agencies to develop plans for development of training resources.

RECOMMENDATIONS:

- Build a centrally located training center with high fidelity training mock ups, driving area and classroom to accomplish single and multi-company training and drills night or day.
- Coordinate with Florida Forestry to increase wildland firefighting training based on risk exposure.

AGENCY: FIRE RESCUE

SECTION IV: APPENDICES

APPENDICES

- Appendix A: Incident Time Line—Call Taking—Dispatch-Radio
- Appendix B: PCSO CAD Detailed History—Fire
- Appendix C: PCSO CAD Detailed History—Sheriff
- Appendix D: Polk County Fire Rescue Internal PIA Draft
- Appendix E: The International Academies of Emergency Dispatch (IAED) Fire Standards Council
- Appendix F: PCSO Review of International Academies Of Emergency Dispatch (IAED) Fire Council Of Standards and Fire/Rescue Special Operations Group Executive Summary
- Appendix G: Text from PCSO Training Bulletin: 18-12-0001
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APPENDIX A: INCIDENT TIME LINE—CALL TAKING—DISPATCH-RADIO

Call Taking		Dispatch-Radio	
Time	Details	Time	Details
19:06:49	Call Taker (Carissa Powell) answered original 911 / not a transfer		
19:06:54	Obtained address and phone number / Call Created		
19:07:17	Caller [REDACTED] advised "I think my house is on fire. I'm here alone and I'm on a walker."		
19:07:27	Call Taker adv help is on the way		
19:07:31	Call entered (Call Alert sent to Fire Pagers)	19:07:31	CAD sent page to fire personnel
		19:07:38	Dispatcher selects call
19:07:59	ECHO level determined from EFD Case Entry		
19:08:06	Call Taker asks CE #4a "What type of building is involved?"		
	RPT "It's a log house with a tin roof... it's coming from the roof I think; I don't know."		
	Call Taker reassures caller that help is coming		
19:08:28	Call Taker gives CE PD1a "I'm sending the fire department to help you now..."	19:08:28	Dispatcher tones EN006, SQ007, EN039, BC001, BC003, MR006
19:08:31	Call Taker begins Key Questions		
19:08:41	Call Dispatched	19:08:41	Verbal dispatch to fire units completed
19:08:50	Call Taker learns that caller is trapped inside the structure		
	Call Taker obtains location of caller within the structure (living room)		
19:08:52	Call Taker adv help is on the way		
		19:08:54	EFD ProQA reclassifies to 69E06R (Trapped person)
		19:09:09	EN006 keys up on Tac-8 to adv they are responding / asks for additional
19:09:22	Call Taker provides CC Protocol 69 PD1b "If it's safe to do so, leave the building, close the doors behind you, and remain outside"		
	Continued with remaining PDI's		
		19:09:27	Dispatcher adv someone trapped inside structure / EN006 acknowledge
19:09:37	Caller adv that she is on a walker and can hardly walk		
19:09:43	Call Taker adv help is on the way		
		19:09:45	EN039 responding
19:09:48	Call Taker returns to Key Questions to obtain further info		
	Caller advises the fire is on the roof she thinks		
		19:09:50	Dispatcher adv someone trapped inside structure / EN039 acknowledge
19:10:10	Caller adv she can't get out the door		

Call Taking		Dispatch-Radio	
Time	Details	Time	Details
		19:10:12	EN006 to EN039 req TE039 resp
19:10:14	Call Taker begins PAI B-1 'Trapped in a building fire (1st party caller)' instructions		
		19:10:19	BC001 adv en-route
19:10:37	Call Taker adv help is on the way		
		19:10:44	Dispatcher adv someone trapped inside structure / BC001 acknowledge
19:11:24	Caller adv she can't get to the floor as instructed		
		19:11:37	EN023 responding
19:12:01	Call Taker adv help is on the way		
		19:12:02	Dispatcher gives update adv trapped person is on a
			walker and can't move quickly
		19:12:51	TE039 responding
		19:12:54	Dispatcher adv someone trapped inside structure
19:13:05	Call Taker adv help is on the way		
19:13:34	Caller adv "Got to get a chair where I can sit in... My walker got away from me."		
	"Okay, I'm sitting down."		
		19:14:19	RQ006 requests to place medical helicopter on standby
19:14:30	Call Taker asks the caller about smoke in the house and if she sees flames		
	Caller adv there is smoke, but states she cannot get outside to check		
	whether there are flames. Sees no flames inside		
		19:15:40	ECC contacts Lakeland Electric for power drop
19:15:49	Call Taker adv help is on the way		
19:16:17	Call Taker adv help is on the way		
19:17:12	Call Taker asks the caller if she is able to get a wet dish towel to place over her face to help with smoke inhalation		
	Caller adv "If I thought I could get up"		
	Call Taker "What are you sitting on right now?"		
	Caller "Dining room chair"		
	Call Taker "Dining room chair, and your walker is away from you?"		
	Caller "It's right I can reach it; I don't know if I can get up with being on the phone."		
	Call Taker "I understand."		

Call Taking		Dispatch-Radio	
Time	Details	Time	Details
	Caller "It's hard for me to get up. I usually do okay. I just sit in my chair and watch TV and stuff while he's gone."		
	It's just I kept hearing these noises, so I went to investigate and I saw the smoke."		
	Call Taker "So it's pretty much hard for you to get up without assistance?"		
	Caller "Usually I can. I don't know, I guess I'm scared. My husband wouldn't leave me if I couldn't get up and go to the bathroom and stuff."		
		19:18:29	Lifenet on standby
19:18:37	Call Taker asks if there is any way the caller can put the phone on speaker so she can use both hands to use walker		
	Caller adv that she wished she knew how but doesn't		
19:18:55	Caller adv she hears sirens		
		19:19:56	EN023 to EN006 adv house is going to be off roadway in pine trees
		19:21:21	EN006 adv to dispatch they are attempting to locate address
			no addresses at the road
			asks dispatch if there is anyway to have the caller step out
		19:22:08	EN006 on scene
			adv large residential structure, smoke showing, working fire
			req power drop
			command established
19:22:20	Call Taker adv the units are there		
19:22:44	Caller adv she can't even see inside		
		19:23:07	EN006 req additional tender / TE006
		19:23:16	EN006 adv heavy flames and smoke showing from structure
			setting up courtyard lay for defensive attack
		19:25:15	EN006 adv structure is half involved
			req ECC to make contact with homeowner to see if anyone lives at home
		19:25:30	Dispatcher advises again there is someone trapped inside structure
			EN006 acknowledges
		19:25:36	EN006 to EN023 req ETA
			adv when EN023 arrives they will make entry with 2 in 2 out to see if anyone is inside structure
19:26:22	Caller adv she sees fire/flames	19:26:22	EN023 on scene

Call Taking		Dispatch-Radio	
Time	Details	Time	Details
19:27:10	Caller adv she is on fire		
	No further contact with caller		
		19:27:27	EN006 adv going to be a defensive attack
		19:27:39	RQ006 on scene
		19:28:28	EN006 req ETA for power drop
			power line down on delta side of house
		19:29:15	BC001 on scene
		19:29:19	BC001 to EN006 "Do you have entrapment?"
			EN006 "It's too far gone to even attempt to make access to the structure now"
			BC001 "I'm not asking you to make access, I'm asking if anyone on scene has confirmed whether you have entrapment or not."
			EN006 "No sir, there are no residents on scene at this time, no cars in the driveway, no residents."
			BC001 "Understood."
		19:29:50	BC003 on scene
		19:30:29	Dispatch to EN006 "Command, we are still landline there is somebody inside the structure."
			adv elderly female in kitchen
		19:31:23	EN006 to Capt 23 "You got a way to get in there or is it too involved?"
			Bravo side "Too involved at this time."
		19:31:41	Dispatch adv Lakeland Electric has been dispatched but no ETA
		19:32:47	BC001 assumes command
			adv medium size wood frame structure fully involved
			power line down on delta side of house
		19:34:16	Lakeland Electric on scene
19:36:29	Caller's phone disconnects		
		19:44:07	Dispatch asks if medical helicopter is still needed
			BC001 adv they can cancel
		19:50:02	BC001 req Law Enforcement for traffic control
		20:07:31	BC001 adv knock down on fire (contained)
		22:26:30	BC001 adv confirmed one deceased inside the residence
		3:16:27	BC001 adv scene still under control / completing salvage and overhaul

APPENDIX B: PCSO CAD DETAILED HISTORY—FIRE

Detailed History for Fire Event #S183271612 As of 3/11/2019 09:40:06

Output for: 8483

Priority: E1 Signal: 69E06 RESIDENTIAL(SINGLE)

Location: [REDACTED] LKN btwn JEH RD and STONE RIDGE LN

Created:	11/23/2018 19:06:54	CTR42	8420
Entered:	11/23/2018 19:07:31	CTR42	8420
Dispatch:	11/23/2018 19:08:41	CDP7	7890
Enroute:	11/23/2018 19:08:51	PS0210	F25684
Onscene:	11/23/2018 19:22:47	CDP1	7263
Control:	11/24/2018 03:16:27	CDP1	7263
Closed:	11/24/2018 07:48:11	CCP13	7522

ICUnit:BC001 PrimeUnit:BR006 Dispo:COM Signal:69E06 - RESIDENTIAL(SINGLE)

Agency:PCFR District:TC8(WEST) Zone:120 RD:1131A

Case #:FS180087368

XREF::Sheriff Event:#S183271693 Signal:S7 Agency:PCSO ☒ Detail

19:06:54 CREATE 8420/CTR42 Location: [REDACTED] LKN Signal:69 Phone: [REDACTED]
 District:WEST Beat:1131A SigDesc:STRUCTURE FIRE LocDesc:btwn JEH RD
 and STONE RIDGE LN Priority:PA Response:3EBMD Agency:PCFR LocType:S
 19:06:54 ALI E911Phone: [REDACTED] E911Add:14600 ROCKRIDGE RD SW SEC, XX
 E911Srce:WRLS

19:07:31 ENTRY
 19:07:31 -NPREMS Comment:(NONE)

19:07:38 SELECT 7890/CDP7
 19:07:55 CHANGE 8420/CTR42 Name:None- [REDACTED] Contact?:None-->Y
 19:08:01 PROQA Case#:4223034 Comment:CC text: Structure Fire
 Caller Statement: REPORTED BUILDING/STRUCTURE FIRE

19:08:25 PROQA Case#:4223034 Classify:69E06 Comment:CAD Response: EN/BC/ALS
 Dispatch Code: 69E06 (Residential (single))
 1. The incident involves a single-family residential structure.

19:08:27 CHANGE Signal:69-->69E06 Priority:PA-->E1 SigDesc:STRUCTURE FIRE--
 >RESIDENTIAL(SINGLE) Comment:Fire ProQA recommends dispatch at this
 time

19:08:41 DISP 7890/CDP7 EN006 Operator:F7100 F7390 F18802 OperNames:WALSH,DEREK;
 GARTRELL,MARY; DURANTE,ALEXANDER

19:08:41 DISP EN039 Operator:F18821 F23251 F26596 F18418 F4851
 OperNames:MOLNAR,ANDREW; BROWN,MATTHEW; GREEN,TIMOTHY;
 QUINN,COURTNEY R; FORBES,ALFRED

19:08:41 DISP SQ007 Operator:F5019 F20852 F13421 OperNames:PARNELL,GARRETT;
 MUSICK,JUSTIN; SHEEHAN,BRITNEY

19:08:41 DISP BC001 Operator:F0838 OperNames:GILLEY,JEREMIAH

19:08:41 DISP MR006 Operator:F26731 F26728 F22403 F25642 F25684
 OperNames:SYDENSTRICKER,JONATHAN; ABELARD,CARL; MUTIS,KELLY;
 STEPHENSON,PATRICK; WINTZ,DANIEL

19:08:41 DISP [BC003](#) Operator:F4710 OperNames:GOROKHOV,YEVGENIY
19:08:41 -PRIU [EN006](#)
19:08:41 -CASE [EN006](#) Case#:FS180087368
19:08:41 -HOLD
19:08:51 *ENRTE F25684/PS0210 [MR006](#)
19:08:54 PROQA 8420/CTR42 [Case#](#):4223034 [Classify](#):69E06 [Comment](#):CAD Response: EN/BC/ALS
Reconfigure Code: 69E06 (Residential (single))
Suffix: R (Trapped person(s))
2. A single-level structure is involved.
3. Someone is trapped inside the structure.
19:08:59 *ENRTE F5019/PS0186 [SQ007](#)
19:09:00 CHANGE 8420/CTR42 [Comment](#):Fire ProQA reconfigured classification
19:09:11 *ENRTE F18418/PS0067 [EN039](#)
19:09:15 REDIR 7890/CDP7 [District](#):WEST-->TC8
19:10:05 ENRTE 7263/CDP1 [EN006](#)
19:10:07 PROQA 8420/CTR42 [Case#](#):4223034 [Classify](#):69E06 [Comment](#):4. One person is trapped.
5. The location is: living room
6. The exact location of the fire is: poss roof
7. No one is reported to be injured.
19:10:09 CHANGE [District](#):TC8-->WEST [Comment](#):Fire ProQA Key Questions
19:10:13 *ENRTE F4710/PS0207 [BC003](#)
19:10:32 INFO 8420/CTR42 [Comment](#):EITHER BACK DOOR OR FRONT DOOR
19:10:35 REDIR 7890/CDP7 [District](#):WEST-->TC8
19:10:55 INFO 8420/CTR42 [Comment](#):PT IS ON A WALKER AND CAN'T MOVE AS QUICKLY
19:10:58 ENRTE 7263/CDP1 [BC001](#)
19:11:12 INFO 8420/CTR42 [Comment](#):RP ADV THAT HER LUNGS ARE FILLING UP WITH SMOKE
19:12:06 INFO [Comment](#):RP ADV THAT SOMETHING SEEMED TO SPLASHED ON HER HEAD
19:13:14 DISPER 7263/CDP1 [TE039](#)
19:14:54 REQUEST 7339/CSP15 [Rtype](#):MCP [ReqReason](#):MEDICAL -[Company](#):LN5 -[Location](#):
19:14:57 INFO 8420/CTR42 [Comment](#):RP ONLY ADV THAT SMOKE IS IN THE HOME BUT SHE CAN'T SEE ANY
FLAMES
19:15:12 INFO [Comment](#):RP ADV THAT THIS IS A LOG HOME WITH TIN ROOF
19:15:40 MISC 7890/CDP7 [Comment](#):TOT LAKELAND ELECTRIC /SB7890
19:15:58 DISP 8285/CDP6 [EN023](#) [Operator](#):F3921 F1204 F18729 [OperNames](#):SHEROUSE,KEITH;
JONES,JOE; HARRIS,LEE
19:16:01 ENRTE [EN023](#)
19:18:19 INFO 8420/CTR42 [Comment](#):RP ADV THAT IT IS HARD FOR HER TO GET UP W/O ASSISTANCE
19:18:29 NOTIFY 7339/CSP15 [Notified](#):LIFENET ON STANDBY//JH7339
19:19:01 INFO 8420/CTR42 [Comment](#):RP IS WORRIED SHE CAN'T GET UP WHILE HAVING THE PHONE IN HER
HAND
19:22:38 INFO [Comment](#):RP ADV THAT HER DOOR IS UNLOCKED
19:22:47 ONSCN 7263/CDP1 [EN006](#) [Comment](#):LARGE RESIDENTIAL STRUCTURE FIRE,WORKING FIRE, LAST
DRIVEWAY BEFORE THE BRIDGE
19:22:52 IC [EN006](#) [ICUnit](#):EN006
19:23:12 INFO 8420/CTR42 [Comment](#):RP ADV THAT SHE CAN'T SEE ANYTHING IN THE HOME DUE TO THE
SMOKE
19:23:52 NOTIFY 7339/CSP15 [Notified](#):SIG PAGE

19:24:27 DISP 7890/CDP7 [TE006](#)
 19:24:33 MISC 7263/CDP1 [Comment:HEAVY FLAMES AND SMOKE,SETTING UP A COURTYARD LAY FOR DEFENSIVE ATTACK](#)
 19:24:53 MISC [Comment:ACCOUNTABILITY ON THE ALPHA SIDE OF THE ENGINE](#)
 19:26:21 INFO 8420/CTR42 [Comment:RP IS IN THE DINING ROOM STILL](#)
 19:26:30 ONSCN 7263/CDP1 [EN023](#)
 19:26:43 INFO 8420/CTR42 [Comment:RP SEES FIRE NOW](#)
 19:26:51 MISC 7263/CDP1 [Comment:HALF INVOLVED AT THIS TIME](#)
 19:26:53 INFO 8420/CTR42 [Comment:RP IS PANICKING](#)
 19:27:05 INFO [Comment:RP IS SCREAMING](#)
 19:27:36 MISC 7263/CDP1 [Comment:DEFENSIVE ATTACK](#)
 19:27:38 *ONSCN F25684/PS0210 [MR006](#)
 19:27:42 ONSCN 7263/CDP1 [MR006](#)
 19:28:03 INFO 8420/CTR42 [Name: \[REDACTED\] Contact?:Y](#) [Comment:RP IS NO LONGER RESPONDING TO X37](#)
 19:28:20 INFO [Comment:X37 HEARS FIRE CRACKILING BUT NO RESPONSE](#)
 19:29:21 ONSCN 7263/CDP1 [BC001](#)
 19:29:50 ONSCN [BC003](#)
 19:30:12 *ONSCN F5019/PS0186 [SQ007](#)
 19:30:46 INFO 8420/CTR42 [Comment:RP STILL NOT RESPONDING TO X37](#)
 19:30:56 CHANGE [District:TC8-->WEST](#) [Comment:Fire ProQA processing complete](#)
 19:30:59 INFO [Comment:STILL LL](#)
 19:31:54 REDIR 8285/CDP6 [District:WEST-->TC8](#)
 19:32:07 MISC 7263/CDP1 [Comment:POWER LINE DOWN ON THE DELTA SIDE OF THE STRUCTURE](#)
 19:33:23 ICX [EN006](#)
 19:33:27 IC [BC001](#) [ICUnit:BC001](#)
 19:33:47 DISP 7890/CDP7 [TE422](#)
 19:34:03 CLEAR [TE006](#) [Dispo:COM](#)
 19:34:26 MISC 7263/CDP1 [Comment:LKLD ELECTRIC JUST ARRIVED](#)
 19:34:42 ENRTE [TE422](#)
 19:35:40 ONSCN [EN039](#)
 19:36:54 DISPER 7890/CDP7 [MD231](#) [Operator:F26999 F26883](#) [OperNames:BENTZ,ERIC; DELUCIA,DEVIN](#)
 19:37:02 INFO 8420/CTR42 [Comment:LINE DEAD NOW//NO FURTHER RESPONSE](#)
 19:37:10 NOMORE
 19:37:21 ONSCN 7263/CDP1 [TE039](#)
 19:38:31 DISP 7890/CDP7 [AT019](#) [Operator:F26422](#) [OperNames:PEREZ,ANDREW](#)
 19:39:24 MISC [MD231](#) [Comment:TAKING FF ON 231 AND PLACING THEM ON BR023](#)
 19:39:31 MISC 7263/CDP1 [Comment:POWER SECURED](#)
 19:39:43 MISC [Comment:MEDIUM SIZED WOOD FRAM STRUCTURE, FULLY INV,DEFENSIVE MODE AT THIS TIME, POWER LINE DOWN ON DELTA SIDE,NO ACCESS TO FIRE TRUCKS DOWN THIS ROAD,COURTYARD LINE LAID](#)
 19:41:34 MISC [Comment:CA006 ALPHA SIDE OPERATIONS](#)
 19:45:33 ENRTE [AT019](#)
 19:50:02 -ASSOC [Service:P Event:#S183271693](#) [Signal:LAW](#) [Agency:PCSO](#) [Comment:LAW NEEDED FOR TRAFFIC CONTROL](#)
 19:50:21 MISC [Comment:FIRE STOPPED TO THE WOODS ON THE BRAVO SIDE, HALF OF STRUCTURE COLLAPSED AT THIS TIME, TRYING TO STOP FIRE FROM GOING TO DELTA SIDE TO THE WOODS](#)

19:50:35 ASSOC 6442/CDP19 Service:P Signal:LAW-->S50
19:53:02 DISP 7890/CDP7 [TE015](#)
19:53:02 DISP [TE004](#)
19:53:33 ENRTE [TE015](#)
19:54:03 ENRTE 7263/CDP1 [TE004](#)
19:55:15 DISP [BR023](#)
19:55:18 ENRTE [BR023](#)
19:55:21 ONSCN [BR023](#)
19:55:55 *ONSCN F26999/PS0196 [MD231](#)
20:03:41 MISC 7890/CDP7 [Comment](#):STANDBYS PER BC007: EN028 - NORTH LAKELAND / EN005 - ZONE 39 / EN017 - ZONE 5
20:04:54 ONSCN 7263/CDP1 [TE422](#)
20:07:31 MISC [Comment](#):GOOD KNOCKDOWN ON THE FIRE AT THIS TIME
20:16:52 MISC [Comment](#):STILL IN DEFENSIVE TACTICAL OPERATION, STILL HEAVY FLAMES FROM THE STRUCTURE,STILL WORKING ON ESTABLISHING PERMANENT WATER SUPPLY,ALL PERSONNEL ACCOUNTED FOR, NO ADDITIONAL RESOURCES NEEDED EXCEPT FOR THE ONES RESPONDING
20:18:57 MISC [Comment](#):BR023 BACK OUT ON THE HARD ROAD STAGING
20:19:20 MISC [Comment](#):PAR 3 ON THE ALPHA SIDE
20:21:35 MISC [Comment](#):DOLLAR STORE NEXT TO CIRCLE K ON WEST END WILL BE WHERE THE CLOSEST HYDRANT IS LOCATED
20:22:23 MISC [Comment](#):CLOSEST HYDRANT IS BY CYPRESS LAKES
20:30:39 ONSCN [TE015](#)
20:42:42 MISC [Comment](#):BC001 PHONE CONSULTED WITH SFM'S OFFICE, WILL CALL THEM BACK WHEN NEEDED TO RESPOND TO THE SCENE
20:44:18 MISC [Comment](#):HYDRANT AT INTERSECTION OF BIG CYPRESS BLVD/FIRESTONE WAY,ON THE LEFT AS YOU COME IN
20:45:01 ONSCN [TE004](#)
20:45:36 MISC [Comment](#):BRUSH FIRE CONTAINED ON ALPHA/BRAVO SIDE//SMALL BRUSH FIRE MAKING ITS WAY TO THE CHARLIE SIDE
20:48:00 ONSCN 7890/CDP7 [AT019](#) [Comment](#):PER AVL
20:48:09 CONTCT [BC001](#) [EN006](#) [AT019](#) [BC003](#) [BR023](#) [EN023](#) [EN039](#) [MD231](#) [MR006](#) [SQ007](#)
[Timer](#):300
20:48:09 CONTCT [TE004](#) [TE015](#) [TE039](#) [TE422](#) [Timer](#):300
20:55:12 MISC 7263/CDP1 [Comment](#):PAR 5 ALPHA SIDE
21:18:16 MISC 4606/CSP16 [Comment](#):VERIZON: 1906 TOWER AT 14600 ROCKRIDGE RD DEVICE IS 1.31 MILES IN A SW DIRECTION. LAT 28.24630 LONG -81.96320 SUBSCRIBER:
[REDACTED]
21:18:24 DISPER 7890/CDP7 [FC506](#) [Operator](#):F2324 F0121 [OperNames](#):VITTON,RAF; BALL,EVERETT
21:20:27 MISC 4606/CSP16 [Comment](#):LAT AND LONG SHOWING NEAR 13616 MICHELLE LEE LOP, LKN
21:22:24 MISC 7263/CDP1 [Comment](#):TE039 IS LEVEL ONE ON THE HARD ROAD
22:15:13 CLEAR [TE422](#)
22:17:03 ONSCN [FC506](#)
22:26:52 MISC [Comment](#):CONFIRMATION OF ONE DECEASED IN THE RESIDENCE
22:54:12 CONTCT 7890/CDP7 [FC506](#) [Timer](#):300
22:59:59 CLEAR 7263/CDP1 [TE015](#)
23:50:43 CLEAR 8285/CDP6 [FC506](#) [Dispo](#):COM
[11/24/2018]

01:48:36	CONTCT	7890/CDP7	BC001 EN006 AT019 BC003 BR023 EN023 EN039 MD231 MR006 SQ007 Timer:300
01:48:36	CONTCT		TE004 TE039 Timer:300
03:16:27	OK	7263/CDP1	BC001 EN006 AT019 BC003 BR023 EN023 EN039 MD231 MR006 SQ007
03:16:27	OK		TE004 TE039
03:16:40	MISC		Comment:COMPLETING SAVAGE AND OVERHAUL
03:23:34	MISC	7890/CDP7	Comment:EN036 MOVED TO STANDBY FOR POLK CITY PER BC002 /SB7890
03:27:23	CONTCT	7263/CDP1	BC001 EN006 AT019 BC003 BR023 EN023 EN039 MD231 MR006 SQ007 Timer:60
03:27:23	CONTCT		TE004 TE039 Timer:60
04:15:47	CLEAR	7890/CDP7	MD231
04:24:40	CLEAR	7263/CDP1	SQ007
04:26:41	CLEAR		MR006
04:29:09	CLEAR		AT019
04:40:46	CLEAR		TE039
04:40:51	CLEAR		EN039
04:45:19	CLEAR		EN023 Dispo:COM Comment:COM
04:46:15	CLEAR		BC003
04:47:23	CLEAR		BC001
04:47:23	-ICX		BC001
04:50:33	MISC		Comment:EN006 STAYING ONSCENE TO PRESERVE THE CUSTODY OF THE SCENE, FIRE MARSHALL COMING BACK OUT AT DAYLIGHT, A COUPLE OF DIFFERENT TRUCKS WILL ROTATE TO HELP PRESERVE THE CUSTODY OF THE SCENE
05:14:47	CLEAR	8285/CDP6	EN006
05:17:23	CLEAR	7890/CDP7	BR023
05:23:07	CONTCT		TE004 Timer:150
05:48:00	CONTCT		TE004 Timer:300
05:52:01	ASSOC	6442/CDP19	Service:P Signal:S50-->S7
07:48:11	CLEAR	7522/CCP13	TE004 Dispo:COM
07:48:11	-CLEAR		
07:48:11	CLOSE		
07:49:57	RO	7352/CDP8	
07:49:59	SELECT		
07:50:06	DISP		BR006
07:50:06	-PRIU		BR006
07:50:06	-HOLD		
07:50:08	ONSCN		BR006
07:50:19	CONTCT		BR006 Timer:60
08:52:07	CONTCT		BR006 Timer:60
09:41:41	BACKER		EN006 UnitID:BR006 Location: [REDACTED] Operator:F7100 F7390 F18802 OperNames:WALSH,DEREK; GARTRELL,MARY; DURANTE,ALEXANDER
09:56:18	ONSCN	7520/CDP14	EN006
09:56:43	CONTCT		BR006 EN006 Timer:60
11:07:48	CONTCT	7352/CDP8	BR006 EN006 Timer:60
12:09:43	CONTCT	7520/CDP14	BR006 EN006 Timer:90
12:52:14	CLEAR		BR006 EN006
12:52:14	-CLEAR		
12:52:14	CLOSE		

CONTACT INFO:

Name	Phone	RPaddr	Contact?	Weapon?	ScnSafe?	CIT?
			Y			
			Y			

APPENDIX C: PCSO CAD DETAILED HISTORY—SHERIFF

Detailed History for Sheriff Event #S183271693 As of 3/11/2019 09:40:30

Output for: 8483

Priority: 2 Signal: S7 - DEATH INVESTIGAT

Location: [REDACTED], LKN btwn JEH RD and STONE RIDGE LN

Created:	11/23/2018 19:50:02	CDP1	7263
Entered:	11/23/2018 19:50:02	CDP1	7263
Dispatch:	11/23/2018 19:51:31	CDP19	6442
Enroute:	11/23/2018 19:51:31	CDP19	6442
Onscene:	11/23/2018 20:01:25	CDP18	6704
Control:	11/23/2018 20:05:37	CDP19	6442
Closed:	11/24/2018 13:22:27	CDP4	4453

ICUnit: PrimeUnit: NW7462U Dispo: LS Signal: S7 - DEATH INVESTIGAT

Agency: PCSO District: NW Sector: 11 Beat: 11A

Case #: PK180054630

XREF: Fire Event: #S183271612 Signal: 69E06 Agency: PCFR ☒ Detail

19:50:02 -CREATE Location: [REDACTED] LKN Signal: 69 Phone: [REDACTED]
District: WEST Beat: 1131A SigDesc: STRUCTURE FIRE LocDesc: btwn JEH RD
and STONE RIDGE LN Priority: PA Response: 3EBMD Agency: PCFR LocType: S

19:50:02 -ALI E911Phe: [REDACTED] E911Add: 14600 ROCKRIDGE RD SW SEC, XX
E911Src: WRLS

19:50:02 -ENTRY

19:50:02 -CHANGE Name: None- [REDACTED] Contact?: None-->Y

19:50:02 -PROQA Case#: 4223034 Comment: CC text: Structure Fire
Caller Statement: REPORTED BUILDING/STRUCTURE FIRE

19:50:02 -PROQA Case#: 4223034 Classify: 69E06 Comment: CAD Response: EN/BC/ALS
Dispatch Code: 69E06 (Residential (single))
1. The incident involves a single-family residential structure.

19:50:02 -CHANGE Signal: 69-->69E06 Priority: PA-->E1 SigDesc: STRUCTURE FIRE--
>RESIDENTIAL(SINGLE) Comment: Fire ProQA recommends dispatch at this
time

19:50:02 -PROQA Case#: 4223034 Classify: 69E06 Comment: CAD Response: EN/BC/ALS
Reconfigure Code: 69E06 (Residential (single))
Suffix: R (Trapped person(s))
2. A single-level structure is involved.
3. Someone is trapped inside the structure.

19:50:02 -CHANGE Comment: Fire ProQA reconfigured classification

19:50:02 -PROQA Case#: 4223034 Classify: 69E06 Comment: 4. One person is trapped.
5. The location is: living room
6. The exact location of the fire is: poss roof
7. No one is reported to be injured.

19:50:02 -CHANGE Comment: Fire ProQA Key Questions

19:50:02 -INFO Comment: EITHER BACK DOOR OR FRONT DOOR

19:50:02 -INFO Comment: PT IS ON A WALKER AND CAN'T MOVE AS QUICKLY

19:50:02 -INFO Comment:RP ADV THAT HER LUNGS ARE FILLING UP WITH SMOKE
 19:50:02 -INFO Comment:RP ADV THAT SOMETHING SEEMED TO SPLASHED ON HER HEAD
 19:50:02 -INFO Comment:RP ONLY ADV THAT SMOKE IS IN THE HOME BUT SHE CAN'T SEE ANY FLAMES
 19:50:02 -INFO Comment:RP ADV THAT THIS IS A LOG HOME WITH TIN ROOF
 19:50:02 -MISC Comment:TOT LAKELAND ELECTRIC /SB7890
 19:50:02 -INFO Comment:RP ADV THAT IT IS HARD FOR HER TO GET UP W/O ASSISTANCE
 19:50:02 -INFO Comment:RP IS WORRIED SHE CAN'T GET UP WHILE HAVING THE PHONE IN HER HAND
 19:50:02 -INFO Comment:RP ADV THAT HER DOOR IS UNLOCKED
 19:50:02 -INFO Comment:RP ADV THAT SHE CAN'T SEE ANYTHING IN THE HOME DUE TO THE SMOKE
 19:50:02 -MISC Comment:HEAVY FLAMES AND SMOKE,SETTING UP A COURTYARD LAY FOR DEFENSIVE ATTACK
 19:50:02 -MISC Comment:ACCOUNTABILITY ON THE ALPHA SIDE OF THE ENGINE
 19:50:02 -INFO Comment:RP IS IN THE DINING ROOM STILL
 19:50:02 -INFO Comment:RP SEES FIRE NOW
 19:50:02 -MISC Comment:HALF INVOLVED AT THIS TIME
 19:50:02 -INFO Comment:RP IS PANICKING
 19:50:02 -INFO Comment:RP IS SCREAMING
 19:50:02 -MISC Comment:DEFENSIVE ATTACK
 19:50:02 -INFO Nam [REDACTED] Contact?:Y Comment:RP IS NO LONGER RESPONDING TO X37
 19:50:02 -INFO Comment:X37 HEARS FIRE CRACKILING BUT NO RESPONSE
 19:50:02 -INFO Comment:RP STILL NOT RESPONDING TO X37
 19:50:02 -CHANGE Comment:Fire ProQA processing complete
 19:50:02 -INFO Comment:STILL LL
 19:50:02 -MISC Comment:POWER LINE DOWN ON THE DELTA SIDE OF THE STRUCTURE
 19:50:02 -MISC Comment:LKLD ELECTRIC JUST ARRIVED
 19:50:02 -INFO Comment:LINE DEAD NOW//NO FURTHER RESPONSE
 19:50:02 -MISC MD231 Comment:TAKING FF ON 231 AND PLACING THEM ON BR023
 19:50:02 -MISC Comment:POWER SECURED
 19:50:02 -MISC Comment:MEDIUM SIZED WOOD FRAM STRUCTURE, FULLY INV,DEFENSIVE MODE AT THIS TIME, POWER LINE DOWN ON DELTA SIDE,NO ACCESS TO FIRE TRUCKS DOWN THIS ROAD,COURTYARD LINE LAID
 19:50:02 -MISC Comment:CA006 ALPHA SIDE OPERATIONS
 19:50:02 COPY 7263/CDP1 Signal:69E06-->LAW District:WEST-->NW Beat:1131A-->11A
 SigDesc:RESIDENTIAL(SINGLE)-->LAW ENFORCEMENT CALL Priority:E1-->1
 Response:3EBMD-->A Agency:PCFR-->PCSO Comment:LAW NEEDED FOR TRAFFIC CONTROL
 19:50:02 -ASSOC Service:F Event:#S183271612 Signal:69E06 Agency:PCFR
 19:50:12 -PREMIS Comment:FPR
 19:50:28 SELECT 6442/CDP19
 19:50:31 HOLD Comment:DISP'D
 19:50:35 CHANGE Signal:LAW-->S50 Response:A-->B SigDesc:LAW ENFORCEMENT CALL-->ASSIST OTHER AGY
 19:51:31 DISPER SW8528U Operator:8528 OperNames: SCHUMACHER, MATTHEW AARON Comment:1018
 19:51:31 DISPER NW8650U Operator:8650 OperNames: WAGSTAFF, JUSTIN MICHAEL Comment:1018

19:51:31 DISPER [NW7462U](#) Operator:7462 OperNames:BATES,BRIAN JOSEPH Comment:1018
19:51:31 -PRIU [SW8528U](#)
19:51:31 -HOLD
19:51:39 BACKER [NW6964S](#) UnitID:SW8528U Location [REDACTED] LKN Operator:6964
OperNames:RYAN,SEAN ROBERT Comment:1051
19:52:41 *RI 8650/S23377 [NW8650U](#)
19:53:43 *RI 8528/S25371 [SW8528U](#)
19:55:02 *BACKER 7770/S24921 [7770KN](#) UnitID:NW8650U Location [REDACTED] LKN Operator:7770
OperNames:ZEIGLER,GARRETT JACOB
19:58:39 *RI 8528/S25371 [SW8528U](#)
19:59:58 *RI 8650/S23377 [NW8650U](#)
20:00:49 CLEAR 6704/CDP18 [NW8650U](#)
20:01:07 *RI 7770/S24921 [7770KN](#)
20:01:25 ONSCN 6704/CDP18 [NW7462U](#)
20:01:31 *RI 8528/S25371 [SW8528U](#)
20:01:49 *RI 7770/S24921 [7770KN](#)
20:02:10 *RI 8528/S25371 [SW8528U](#)
20:02:11 ONSCN 6442/CDP19 [7770KN](#)
20:02:22 *RI 8528/S25371 [SW8528U](#)
20:03:40 *ONSCN [SW8528U](#)
20:05:37 OK 6442/CDP19 [SW8528U](#) [7770KN](#) [NW7462U](#)
20:05:52 MISC [NW7462U](#) Comment:NW TAC 1 IS TAC / ROCKRIDGE SHUT DOWN AT BOTH
DIRECTION
20:10:27 MISC [NW7462U](#) Comment:FIRE WAS NOT ABLE TO FIND ANYONE INSIDE THE HOUSE /
FIRE STILL GOING AND STARTED A BRUSH FIRE
20:12:04 MISC [7770KN](#) Comment:POSS s7 INSIDE THE HOUSE
20:16:47 MISC [7770KN](#) Comment:FIRE ADV s77 AND HAVE THE FIRE CONTAINED
20:37:26 OK [SW8528U](#) [7770KN](#) [NW7462U](#)
20:40:08 PRMPT [7770KN](#)
20:56:54 *ONSCN 6964/S25428 [NW6964S](#)
20:56:55 *OK [NW6964S](#)
21:11:13 PRIOR 6442/CDP19 Location [REDACTED] LKN
21:11:34 MISC [NW6964S](#) Comment:NO PRIOR HISTORY FOR THIS ADDRESS IN TIBURON
21:11:45 MISC [NW6964S](#) Comment:UNITS ARE 1048
21:12:10 MISC [NW6964S](#) Comment:ATL A SUBSCRIBER INFO AND PING THE PHONE PER 6964
21:12:18 *RI 8528/S25371 [SW8528U](#)
21:12:21 CSREQ 6442/CDP19 Message:011811240212000922 MessageType:Text Received:11/23/2018
21:12:21 Comment:RequestMessage
21:19:48 *RFT 6964/S25428 [NW6964S](#) Comment:INQUIRY FDQ,P263531419280,.....
21:22:37 MISC 4606/CSP16 Comment:VERIZON: 1906 TOWER AT 14600 ROCKRIDGE RD DEVICE IS 1.31 MILES
IN A SW DIRECTION- LAT 28.24620 LONG: -81.96320 SUBSCRIBER [REDACTED]
21:22:42 MISC Comment:LAT AND LONG SHOWING NEAR 13616 MICHELLE LEE LOP, LKN
21:23:28 MISC 6442/CDP19 [NW6964S](#) Comment:6964 1048 OF THE PING UPDATES
21:26:50 OK [SW8528U](#) [NW6964S](#) [NW7462U](#) Comment:ALL UNITS s77 ON NW TAC 1
22:04:52 BACKER 7480/CDP5 [SW2309L](#) Operator:2309 OperNames:BROWDER,MARY G
22:17:24 OK 6442/CDP19 [SW8528U](#) [NW6964S](#) [NW7462U](#)

22:18:29 *RI 8528/S25371 [SW8528U](#)
22:56:33 *CASE 7462/S23926 [NW7462U](#) Case#:PK180054630
23:10:36 MISC 6442/CDP19 [SW8528U](#) Comment:POSS 1012 WITH THE HOME OWNER
23:11:00 MISC [SW8528U](#) Comment:1012 WITH THE VEH ALSO AND THE DL COMES BACK TO THE
SAME 1020 / 6964 1048
23:11:32 NOTIFY 4606/CSP16 [Notified:1039 CRIME SCENE](#)
23:11:44 MISC 6442/CDP19 [SW8528U](#) Comment:1012 WITH JAMES ARTER PIKKARD / 6964 1048
23:11:50 CHGLOC [NW6964S](#)
23:13:29 *BACKER 5559/S24672 [5559H](#) UnitID:NW7462U Location: [REDACTED], LKN Operator:5559
OperNames:KISTLER,TERESA RENEE
23:18:54 NOTIFY 4606/CSP16 [Notified:1039 CHAPLAIN RISNER](#) Comment:1051 FROM ECC
23:22:27 MISC 6442/CDP19 [NW7462U](#) Comment:MORE FAMILY COMING IN THAT SUV
23:52:51 *RI 7462/S23926 [NW7462U](#)
[11/24/2018]
00:01:16 *ONSCN 5559/S24672 [5559H](#)
00:01:16 *OK [5559H](#)
00:04:47 *CLEAR 2309/S25417 [SW2309L](#)
00:14:54 *RI 8528/S25371 [SW8528U](#)
00:26:21 *ONSCN 6964/S25428 [NW6964S](#)
00:26:22 *OK [NW6964S](#)
00:26:27 *CLEAR [NW6964S](#)
00:28:47 OK 6442/CDP19 [SW8528U](#) [5559H](#) [NW7462U](#)
00:55:42 MISC [NW7462U](#) Comment:1098 NW TAC 1
00:56:04 PRMPT [SW8528U](#)
00:56:06 PRIU [NW7462U](#)
00:59:46 BACKER 6704/CDP18 [NW8650U](#) UnitID:NW7462U Location: [REDACTED] LKN Operator:8650
OperNames:WAGSTAFF,JUSTIN MICHAEL
01:02:06 CLEAR [NW8650U](#)
01:02:22 *MISC 7462/S23926 [NW7462U](#) Comment:ROCKRIDGE ROAD IS REOPENED
01:25:37 *CLEAR 5559/S24672 [5559H](#)
05:15:09 *BACKER 7811/S23747 [7811H](#) UnitID:NW7462U Location: [REDACTED] LKN Operator:7811
OperNames:THOMPSON,AUTUMN BROOKE
05:20:08 OK 6442/CDP19 [NW7462U](#)
05:49:33 *ONSCN 7811/S23747 [7811H](#)
05:49:34 *OK [7811H](#)
05:49:59 BACKER 6442/CDP19 [NW3837U](#) UnitID:NW7462U Location: [REDACTED], LKN Operator:3837
OperNames:PLUMLEY,JERRY MILES
05:52:01 CHANGE [NW7462U](#) Signal:S50-->S7 Response:B-->C Priority:1-->2 SigDesc:ASSIST
OTHER AGY-->DEATH INVESTIGAT
06:13:19 *ONSCN 3837/S23645 [NW3837U](#)
06:13:21 *OK [NW3837U](#)
06:18:59 CLEAR 6442/CDP19 [NW7462U](#) Dispo:L
06:37:17 OK [7811H](#) [NW3837U](#)
06:40:00 *BACKER 6103/S25363 [6103H](#) UnitID:7811H Location: [REDACTED] LKN Operator:6103
OperNames:MILLER,MICHELLE ANNETTE
07:54:37 *ONSCN [6103H](#)
07:54:45 *OK [6103H](#)
09:59:53 BACKER 4453/CDP4 [NW8567U](#) UnitID:NW3837U Location: [REDACTED] LKN Operator:8567

OperNames: MARCELLO, ROBERTO

10:26:43 *ONSCN 8567/S25516 [NW8567U](#)
 10:27:54 *OK [NW8567U](#)
 10:28:31 CLEAR 4453/CDP4 [NW3837U](#)
 12:56:02 *CLEAR 6103/S25363 [6103H](#)
 12:57:02 *CLEAR 7811/S23747 [7811H](#)
 13:22:27 CLEAR 4453/CDP4 [NW8567U](#) Dispo:LS
 13:22:27 -CLEAR
 13:22:27 CLOSE

CONTACT INFO:

Name	Phone	RPaddr	Contact?	Weapon?	ScnSafe?	CIT?
			Y			
			Y			

APPENDIX D: POLK COUNTY FIRE RESCUE INTERNAL PIA DRAFT

2

Polk County Fire Rescue

Post Incident Analysis



Residential Structure Fire

With Entrapment



Alarm # 1887368

November 23rd, 2018

19:06:54

Battalion 1

This report is intended to serve as a safety and training tool. Information contained herein is subject to revision as further investigation is conducted and additional information is developed.

Prepared by: Battalion Chief Jeremiah Gillev Date: 12/06/2018

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Incident Data

Incident Date:

November 23rd, 2018

Incident Report Number:

1887368

Alarm Time:

19:06:54

Incident Location:



Polk County Fire Rescue Units Responding:

Engine 6, Engine 23, Engine 39, Squad 7, Rescue 6, Brush 23, Medic 231, Battalion 1, Battalion 3, Tender 39, Tender 15, Tender 4, Air Truck 19, Chief 506.

Mutual Aid Units Responding:

Auburndale Fire Department Tender 4.

Type of Incident:

Residential Structure Fire with entrapment.

Weather:

Warm, dry, no precipitation.

Response delays:

No response delays noted. E-23 had a faster response time because they were already traveling to another call closer to this call than their station is. They were near Kathleen Middle School when the call came in.

Executive Summary

A residential structure fire occurred at this address. The home was a wood frame log cabin. One occupant of the residence perished in the fire. The fire origin and cause remains undetermined at this time and is under investigation by the State Fire Marshal's Office. The structure was inhabited and served as the home for two people. The structure did have power. There were no hydrants in the area. Access to the structure was blocked by overgrown trees and an uneven and unpaved dirt roadway.

This emergency call had several components which led to it being the "perfect storm". To begin, it was a predominantly wood frame structure located in a remote urban/rural interface without water supply. The occupant of the home was not readily ambulatory, and the first call for help was made to a family member and not to 911, which ultimately delayed emergency response.

The view of the home was hidden from the street by the woods and there was not a visible numerical address. The road access to the home was also overgrown with trees and the road itself is most likely unpassable by a typical fire apparatus even if the trees had been trimmed back. Any type of residential firefighting operations with an obstacle of performing operations with the closest apparatus parking 300 to 400 feet away has a higher probability for a poor outcome.

Evidence suggests the home did not have working smoke detectors, because none were heard in the background of the twenty minute intake call recorded by Dispatch. The residence also had several (10 or more) trees close to or touching the house. This further hid the fire and structure from the roadway and hampered firefighting operations.

Benchmarks

Accountability:

Accountability initially was overseen by Captain 6, James Williams, who assumed Command of the scene upon his arrival and established accountability on the Alpha side of the structure at Engine 6 (side facing the driveway to the home). Accountability was taken over by Battalion 3, Yevgeniy Gorokhov, shortly after his arrival.

Initial strategy:

A defensive fire attack was initiated by the first on scene Captain, James Williams, and his engine crew. Captain Williams reported a working fire in the structure so heavily involved he did not feel entering the structure was safe. Furthermore he reported active and fallen power lines on the Alpha/Delta side of the structure which would have prohibited access and hindered doing a walk around of the entire structure. The defensive attack utilized by Captain Williams consisted of deploying a courtyard lay of 300 feet of 2.5" hose to a gated wye and then reducing down to a 1 and 3/4" handline. The courtyard lay was deployed down the driveway. A second handline was later added once a sufficient water supply was established with the use of Tender trucks. The closest hydrant to this address is over five (5) miles away.

Staffing:

Two battalion chiefs, three engines, one squad, one medic unit, one rescue, four tenders, an air truck, a medic unit, and one brush truck responded to the scene for a total of 18 firefighters and two single-cert. employees

Safety Officer:

Safety functions were overseen by Command using Bluecard protocol. Accountability was overseen by Command, (James Williams initially) and then taken over by Battalion 3, Yevgeniy Gorokhov, for the duration of the call. No Safety Officer responded to this call.

Rehab:

Medic 231 established Rehab per orders from Incident Command.

Tactics / Strategy

Size up:

Initial incident was identified as a working fire in a residential structure with reported entrapment. Heavy smoke and flames were showing from multiple points of the residence.

Risk assessment:

The initial on scene Captain and commanding officer, Captain 6 (James Williams), deemed the risk to enter the structure to attempt a rescue too dangerous. His initial tactical decisions focused predominantly with the choice to go defensive (no entry into structure) and establish a hoseline for a defensive fire attack.

Identification of Hazards:

First arriving officer, Captain 6 (James Williams), reported IDLH atmosphere was immediately present upon arrival with heavy smoke and flame conditions in the structure which would also affect visibility. He further reported active fallen power lines adjacent to the structure.

Water Supply:

A water source with a dump tank and tender operations was set up as a water supply because there were no hydrants.

Search/Rescue:

Search and Rescue was not performed by the first arriving engine crew because the structure was deemed too dangerous and unstable by Captain 6 to enter. A primary search of the structure was performed once the fire was under control and mostly extinguished.

Staging:

Apparatus staging was initially established on Rock Ridge Road. No Staging Officer was utilized. The only units staging were Tenders and water supply needs controlled and dictated their arrivals and departures to and from the scene.

Exposures:

Some residential exposures were noted in the immediate adjacent properties, however, none were ever threatened by this fire due to their distance away. Crews did deal with the wildland interface exposure fires created by the structure fire and extinguished those various fires with Brush 23.

Occupant Services:

N/A

Patient Care:

No patients were treated or transported from this scene.

Command / Control

Effectiveness of Command Structure:

Staff build up at the scene transitioned and instituted an organized command structure suitable for the scope of the event.

Transition from Offense to Defense:

Captain 6, James Williams, operated from a defensive strategy, and a defensive strategy only, subsequent to his size up of the scene.

Use of Mutual Aid:

Auburndale Fire Department supplied a tender per our mutual aid request.

Use of Staff Support:

Chief 506, Raf Vittone, responded to the scene as staff officer representative and support. He gave approval for the purchase of nourishment for the crews.

Interface with other Agencies:

Polk County Sheriff's Office was crucial for scene preservation, traffic control, scene access, and crime scene operations. State Fire Marshal's Office was notified early in the scene while firefighting operations were still underway.

Communications

Effectiveness of Communication Structure:

There were no issues with the Communication Structure of the event. Units were placed on a designated Tac channel and radio operations worked as expected.

Tactical Channels:

This was a two day event. Tac channel 8 was utilized for response and command/operational communication with assigned units.

Communications Concerns / Areas of Improvement:

Dispatch did not relay exact information as it was received from the caller until the climax of the event. Entrapment was relayed to responding units, however, the source reporting we had entrapment (caller inside home) was not relayed until late in the response after the arrival of Engine 6. Reports of entrapment has to verified upon our arrival before making an entry into an IDLH atmosphere. A caller inside the home reporting "I am trapped" is a guarantee of entrapment requiring immediate intervention and should have been relayed sooner to responding crews.

In addition, the intake matrix should have been deviated from much sooner, with the focus of the intake dispatcher shifting to encouraging the trapped occupant to get out of the house or at least to a door to assist in her rescue. Several items were discussed during the intake call that were not overall important to the mitigation of the scene. I am confident the intake dispatcher followed her training matrix with the items discussed, but the occupant attempting to self-rescue on this call, or at least try, was extremely important.

Communication Interface with Other Agencies:

N/A

Lessons Learned:

Things that went well:

Firefighting operations overall were successful. No firefighters were injured while working on the scene. The fire was extinguished as quickly as limited water resources and access would allow for this type of fire, which was well involved upon our arrival. Overhaul of the structure was a success, with no rekindle of fire within the structure. Preservation of the scene as a possible crime scene was successful and facilitated with the assistance of Polk County Sheriff's Office and The State Fire Marshal. Coverage zones of occupied units were covered per typical operational protocols with other units while this scene was being mitigated. No exposures were damaged, and the subsequent brush fire resulting from this structure fire was contained. All proper notifications to all authorities were made in a timely fashion.

Captain 23, Keith Sherouse, did an excellent job of having situational awareness of when this call came in. Engine 23 was already assigned to another call when this call came in. Captain 23's awareness and diversion of response to this call assisted in facilitating a more positive outcome overall and improved response time of the second Engine to arrive on the scene.

Things that could have been done better:

The relay of exact information as it was received by dispatch to responding crews could have been more accurate, and relayed earlier in the response. Tactical decisions made by the first in Company Officer (Captain 6) should have been different. A courtyard lay 300' or more in length is not feasible for a search and rescue operation of an already partially involved structure. Crew members (Captain and Firefighter) should have exited the apparatus breathing air and headed to the structure with forcible entry tools. Awaiting more personnel for a two-in, two-out rescue, although safer, was not necessary in this situation because of the report of entrapment. A more thorough examination of the structure should have been performed by walking around all sides of the structure except where the power line had fallen, to verify any possible routes remaining of ingress and egress.

Evidence does clearly show this structure was heavily involved fire, filled with smoke, and dangerous in every way to responders. However, review of the intake call and examination of the structure reveals that most likely a majority of the initial fire was in the attic, or attic spaces, above the occupant's head. Fire and smoke was coming out of every opening in the structure at ceiling level and above. The possibility does exist there was a very short period of time when the living space of the home could have still be entered by responders and a rescue attempt made. It must also be stated though that due to the escalation of the fire at this point, the chances of this rescue attempt being successful was improbable, and a high probability existed that this incident could have claimed the lives of two firefighters if they became disoriented in the smoke or if the structure collapsed while they were inside. In addition, this attempt at a

rescue would have been performed without a charged hoseline in place, or a backup up team to assist in the egress or rescue of these firefighters had they become compromised in their rescue attempts. Overall this emergency event represents the highest level of danger a responding firefighting crew can face.

Inexperience did play a part in the initial response and command structure of this event. The Captain and Firefighter are both inexperienced, and are a fair representation of the experience of Polk County Fire Rescue overall due to our recent rapid growth. A fire of this magnitude, coupled with the logistical and geographical challenges, along with the entrapment of a human, was overwhelming to this inexperienced crew and would overwhelm many others in this same situation. The Captain also displayed a lack of knowledge of the OSHA's two-in, two-out rule, and the allowance under this rule to execute a rescue without a back-up team in place. This did play a part in the Captain's decision whether or not to enter the structure.

Furthermore it should be noted, a decision was made not to take Tender 6 to this incident by Captain 6, because that would have otherwise occupied the firefighter and delayed response. This was the right decision, however, it does compromise water supply and places an equally difficult issue on the tactical decisions of the first in Captain, as well as subsequent responding Chief Officers. Engine 6, like most other County engines, has three personnel assigned to it. This manpower is simply not enough in a remote zone like Battalion One (North Lakeland) to facilitate proper and safe rescues of trapped persons and bring our own water supply, especially on incidents that are so far from the station.

An area for global training and improvement:

N/A

Additional

Identified need for improved resources:

- Four person crews to facilitate the crucial emergency actions necessary by first-arriving fire apparatus. Until this manpower level is achieved, rescue of those trapped in structure fire situations will be nearly impossible, especially for those individuals who are unable to ambulate.
- Increased departmental training for our Engine Captains emulating extreme emergency situations.
- Increased personnel in the Battalion One zone including but not limited to Engines, Rescues, and better station placement. Every zone in Battalion One is left extremely compromised when the primary Engine for that zone responds to a medical call or motor vehicle crash, especially if they are already on scene of said event and committed.
- Tenders should be staffed, so as not to pull away from the manpower on the engine for water supply needs. Our water supply needs on this emergency call downed the staffing levels of three other County Engines that night, setting the stage for a duplicate disaster in another zone.
- Hydrants in the unincorporated areas of North Lakeland.
- Better Public Safety programs to educate citizens on the need for proper, visible street addressing visible during the day and night. In addition, better Public Safety programs to educate citizens on the need for clear and unobstructed access to their residence to facilitate emergency mitigation by responders.









Live FireRECORDS

Incident Report

Incident Number: 1887368	Number of Alarms: 1	Date: 11/23/2018	Time: 19:06
Shift: B	District: 1131A	Exposure: 000	Station: 06
Alarm Time: 11/23/2018 19:06	Arrival Time: 11/23/2018 19:22	Controlled Time: 11/24/2018 03:16	Cleared Time: 11/24/2018 07:48

Incident Address

Dispatch Address: [REDACTED]	Actual Address: [REDACTED]	Address Type: 1 - Street address
Property Use: 419 - Single Family Dwelling	Insurance Carrier:	Common Name:
Latitude:	Longitude:	Phone:

Incident Classification

Incident: 2018-1887368-000 Version 78 of 78 Saved On: 11/28/2018 11:25:07 AM by Migone, Elsa

Incident Type as Dispatched:	1 - Fire
Actual Incident Type:	111 - Building fire
Mutual Aid:	1 - Mutual aid received FDID: 05102 State: FL Incident Number: 1887368
Hazardous Materials Release:	N - None

Actions Taken:

11 - Extinguishment by fire service personnel	76 - Provide water
12 - Salvage & overhaul	81 - Incident command
14 - Contain fire (wildland)	82 - Notify other agencies.
21 - Search	86 - Investigate
24 - Recover body	

Value - Property: 250000	Contents: 100000	Loss - Property: 250000	Contents: 100000
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Authorities

Incident: 2018-1887368-000 Version 78 of 78 Saved On: 11/28/2018 11:25:07 AM by Migone, Elsa

Member Making Report: 11286	Officer In Charge: 0838
Other Authorities:	Report Completed: Yes
Member Name: [REDACTED]	Role: [REDACTED]

Incident Persons Involved

Incident: 2018-1887368-000 Version 78 of 78 Saved On: 11/28/2018 11:25:07 AM by Migone,

Elsa

Person Involved:

Name: [REDACTED]

Address: [REDACTED]

Date Of Birth:

Gender: 2 - Female

Race: 1 - White

Ethnicity: 0 - Non Hispanic or Latino

Involvement:

Business:

Incident Property

Incident: 2018-1887368-000 Version 78 of 78 Saved On: 11/28/2018 11:25:07 AM by Migone, Elsa

Area Of Origin: UU - Undetermined

Heat Source: UU - Undetermined

Item First Ignited: UU - Undetermined

Material First Ignited: UU - Undetermined

Cause of Ignition: 2 - Unintentional

Buildings:

Residential Units: 1

Acres Burned: 1.0

On Site Materials:

Human Factors	Factors Contributing to Ignition	Fire Suppression Factors
5 - Physically disabled		438 - Power lines down/arcing
N - None	UU - Undetermined	443 - Poor access for firefighters
Age: 76		531 - Water supply inadequate: private
Gender: 2 - Female		

Incident Structure

Incident: 2018-1887368-000 Version 78 of 78 Saved On: 11/28/2018 11:25:07 AM by Migone, Elsa

Structure Type: 1 - Enclosed building

Status: 2 - In normal use

Item Contributing to Flame Spread: 17 - Structural member or framing

Material Contributing to Flame Spread: 63 - Sawn wood, including all finished lumber

Fire Spread: 4 - Confined to building of origin

Main Floor -

Length: 0

Width: 0

Area: 3000

Story of Origin: 1

Floors Below Grade:

Floors Above Grade: 1

Floors Damaged -

Minor:

Significant:

Heavy:

Extreme: 1

Total:

Incident Personnel

Incident: 2018-1887368-000 Version 78 of 78 Saved On: 11/28/2018 11:25:07 AM by Migone, Elsa

Personnel ID	Last Name	First Name	Rank / Position
26593	Gonzalez	Manuel	FF
11286	Williams	James	CAPT
22403	McMorrow	Kelly	FF
26653	Moersch	Nicholas	FF
0838	Gilley	Jeremiah	BC
4710	Gorokhov	Yevgeniy	BC
4851	Forbes	Alfred	FF

26596	Green	Timothy	FF
18418	Quinn	Courtney	CAPT
5042	Culpepper	Kevin	EN
4851	Forbes	Alfred	FF

Personnel Actions Taken

Incident: 2018-1887368-000 Version 78 of 78 Saved On: 11/28/2018 11:25:07 AM by Migone, Elsa

Action
1 - Fire Control or Extinguishment
11 - Extinguishment by fire service personnel
12 - Salvage & overhaul
21 - Search
24 - Recover body
55 - Establish safe area
73 - Provide manpower
76 - Provide water
81 - Incident command
82 - Notify other agencies.
84 - Refer to proper authority
86 - Investigate

Incident Apparatus and Resources

Incident: 2018-1887368-000 Version 78 of 78 Saved On: 11/28/2018 11:25:07 AM by Migone, Elsa

Unit ID	Dispatched	En-route	Arrival	Cleared Scene	Arrive Facility	Cleared Facility	In Service	In Qtrs
EN006	11/23 19:08	11/23 19:10	11/23 19:22			11/24 05:14		11/24 05:14
BC003	11/23 19:08	11/23 19:10	11/23 19:29			11/24 04:46		11/24 04:46
MR006	11/23 19:08	11/23 19:08	11/23 19:27			11/24 04:26		11/24 04:26
BC001	11/23 19:08	11/23 19:10	11/23 19:29			11/24 04:47		11/24 04:47
SQ007	11/23 19:08	11/23 19:08	11/23 19:30			11/24 04:24		11/24 04:24
EN039	11/23 19:08	11/23 19:09	11/23 19:35			11/24 04:40		11/24 04:40
EN023	11/23 19:15	11/23 19:16	11/23 19:26			11/24 04:45		11/24 04:45
TE039	11/23 19:13	11/23 19:13	11/23 19:37			11/24 04:40		11/24 04:40
TE004	11/23 19:53	11/23 19:54	11/23 20:45			11/24 07:48		11/24 07:48
BR023	11/23 19:55	11/23 19:55	11/23 19:55			11/24 05:17		11/24 05:17
AT019	11/23 19:38	11/23 19:45	11/23 20:48			11/24 04:29		11/24 04:29
MD231	11/23 19:36	11/23 19:36	11/23 19:55			11/24 04:15		11/24 04:15

FC506	11/23 21:18	11/23 21:18	11/23 22:17			11/23 23:50		11/23 23:50
TE015	11/23 19:53	11/23 19:53	11/23 20:30			11/23 22:59		11/23 22:59
TE006	11/23 19:24					11/23 19:34		11/23 19:34

Apparatus Actions Taken

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Action
11 - Extinguishment by fire service personnel
12 - Salvage & overhaul
14 - Contain fire (wildland)
21 - Search
24 - Recover body
31 - Provide first aid & check for injuries
73 - Provide manpower
74 - Provide apparatus
76 - Provide water
81 - Incident command
82 - Notify other agencies.
84 - Refer to proper authority
86 - Investigate
93 - Cancelled

Incident Civilian Casualty

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Civilian Name: [REDACTED] Address: [REDACTED]		
Date Of Birth: Race: 1 - White	Gender: 2 - Female Ethnicity: 0 - Non Hispanic or Latino	
Date and Time of Injury: 11/23/2018 00:00		
Affiliation: 1 - Civilian	Disposition: N - Not transported under EMS	Cause of Injury: 1 - Exposed to fire products
Severity: 5 - Death	Primary Apparent Symptom: 11 - Burns and smoke inhalation	Primary Part of Body Injured: 9 - Multiple Parts
Activity When Injured: 7 - Unable to act	Location at Time of Incident: 2 - Not in area & not involved	General Location at Time of Injury: 2 - In building, but not in area of origin
Specific Location at Time of Injury: 14 - Common room, den, family room, living room, lounge		
Story at Start: 1		Story Where Injured: 1

Human Factors:
6 - Physically disabled

Factors Contributing To Injury:
23 - Vision blocked or impaired by smoke
41 - Roof collapse

Incident Narrative

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Title: Engine-6
Narrative Text:

Type: 1 - Incident

Author: James Williams

EN06 arrived on scene of a structure that was located approximately 300ft off the main access road. Visibility of the structure upon arrival was not obtainable because trees covered the property, and tightly surrounded the home. First observation while attempting to complete a 360 of the incident was a medium size structure that appeared to have fire involvement on the alpha, bravo side that involved the interior, and extended through the roof which was signaling potential fire throughout the attic as smoke was exiting all four corners of the home. Yard debris, lighting and vegetation hindered a productive 360 of the home. Command was established and a power drop was requested. Command then gave the order to establish a court yard lay that would supply water back to the structure so a primary search could be completed. This would be accomplished by utilizing EN06. Command then requested confirmation from dispatch that the information received was from someone inside the home since conditions to enter were not possible without water and deteriorating quickly hindering any ability for firefighters to make entry. Seconds after information was requested the power line disconnected from the riser dropping across the driveway causing a electrical danger stopping any access to the delta side and confirmed complete involvement in the attic since the riser was attached on the alpha, delta corner. Prior to EN23 arrival on scene they were given direction that their assignment was to establish a water supply and to provide crew members for a primary search of a possible victim. Command determined that fire was rapidly spreading through the home and a search could not be performed. The home quickly became 100% involved which changed the tactics to defensive since a rescue was no longer achievable. Battalion Chief-1 arrived and was given a conditions, actions and needs report. Battalion Chief-1 took over command at this time.

Title: BC003
Narrative Text:

Type: 2 - Company

Author: Yevgeniy Gorokhov

Battalion 3 (BAT3) arrived on a fire scene; initial command had been established by Engine 6

(EN6); during the follow up report EN6 advised that accountability was placed by EN6, BAT3 assumed the accountability role at the same time Battalion 1 (BAT1) assumed Command from EN6; all fire ground personnel were staged at the accountability area and deployed for assignments from the same area; Medic 231 (MD231) was assigned to set up rehab 20-30 feet away from the front bumper of EN6; vital signs were obtained on every firefighter that came in for recycle or rehab; Shift Duty Officer was notified, food and more water supplies were delivered on scene due to an extensive overhaul; everybody was accounted for at all times; no injuries were reported to Command or Accountability.

Title: Engine 23

Type: 2 - Company

Author: Keith Sherouse

Narrative Text:

EN23 arrived on scene with direction from command to establish a water source and provide manpower at the alpha side of the structure.

Captain-23 attempted to make a complete 360 of the structure to assist command with determining if there was the ability to gain access into the structure for from another point for a rescue attempt. The home was too heavily involved, upon EN23 arrival for any possibility of making entry. Command determined that the fire needed to redirect into a defensive mode. Battalion Chief -1 arrived on scene and took over command.

Engineer 23 was assigned water supply officer. No hydrant was located in the area and dump tank/Tender operations was utilized. Hydrant was established at Cypress Lakes sub division. Approximately 28,000 gallons of water was used to extinguish fire. Additional water was needed and Auburndale Fire was called for a mutual aid tender (T-421). Tender 421 supplied 9000 gallons of the water used.

Captain 23 was reassigned to Alpha Operations and defensive strategy continued while recycling crews through Accountability Officer until fire was extinguished and overhauled. All crew members cleared from scene by Command.

Engine 23 and Brush 23 returned to station out of service until units was refueled and refilled with water.

Title: Squad 7/ Brush 23

Type: 2 - Company

Author: Garrett Parnell

Narrative Text:

Squad 7 was dispatched to a report of a residential structure fire at the above location. SQ 7 was designated as the third arriving engine and was directed to supply EN 23 with water upon arriving on scene.

SQ 7 arrived on scene and made access to EN 23 down a long dirt driveway. SQ 7 crew supplied EN 23 with a section of 2 1/2" supply line. Command (Battalion1) ordered SQ 7 crew to back our unit out to the hard road and return to the scene on foot for further instruction.

Upon returning to the staging area, Command directed SQ 7 crew members to man Brush 23. BR 23 was sent to the East of the fire scene to check for exposures and control the brush fire started by the structure fire. Captain 7 was designated as "Charlie Division". Access was made to the assigned area and no structural exposures were found. Crews were not able to access the brush fire due to large trees and multiple fences. BR 23 returned to the staging area and "Charlie Division" was disbanded.

BR 23 was directed to return to the Alpha side of the structure and extend a line to extinguish spot fires on the charlie and bravo sides under the direction of "Alpha Division". After extinguishing the spot fires, crew members assisted with overhaul operations of the main fire structure. Crew members continued in this role until SQ 7 was cleared by Command.

Title: E39

Type: 2 - Company

Author: Courtney Quinn

Narrative Text:

Upon arrival E39 found structure fully involved. E39 pulled pre connect off of E23 and connected to courtyard lay for fire suppression. E39 provided man power for fire control and salvage and overhaul.

Title: T39

Type: 2 - Company

Author: Courtney Quinn

Narrative Text:

T39 provided dump tank and water for fire operations.

Title: Battalion 1 (Incident Command)

Type: 1 - Incident

Author: Jeremiah Gilley

Narrative Text:

Battalion 1 arrived on scene to find a working residential house fire. Battalion 1 had called for a power drop while en route to the scene. Captain 6 repeated the request to Dispatch again after he arrived on scene and identified a working structure fire. The home was located on an unpaved road in the woods and was heavily surrounded by pine trees. The working structure fire could not be seen from Rock Ridge Road. Initial responding crews had extreme difficulty locating the residence because of the secluded location, the lack of an address on Rock Ridge Road that could be seen visually, and the distance of the structure from the roadway. E-6, E-23, Battalion 3, and Rescue 6 were already on scene prior to my arrival. Command had been established, a courtyard lay fire attack line was deployed down the driveway to the structure, and crews were working to establish a water supply. Captain 6, as Command, had declared a defensive attack mode. The area does not have hydrants. The closest commercial hydrant is approximately 5 to 6 miles away. A water nursing operation was utilized between apparatus until a dump tank operation could be set up and utilized. Crew members were attempting to fight the fire defensively from the Alpha side (front) of the structure. Battalion 1 met up face to face with Battalion 3 and assigned him the function of Accountability of on scene personnel. Battalion 1 also met up with Command, (Captain 6) and assumed Command from him after receiving a face to face C.A.N. report. A P.A.R. was performed. Captains and Firefighters, 4 personnel total initially, were located on the Alpha side and were designated Alpha Division for tactical operations. Alpha Division used a one and three quarter inch attack line, derived from the two and a half inch courtyard hose lay, for initial fire attack and for protection. Captain 23 performed a 360 walkaround of the structure to ensure a rescue attempt was not feasible. An energized power line was down on the Delta

side (right side) of the structure. Captain 23 reported very high heat conditions all around the structure and visual flames in every doorway and window of the house. Squad 7 arrived on scene shortly behind Battalion 1 and assisted with manpower and checking the area for other structures that may be exposed. They also performed recon. of the wooded area around the home because a brush fire had begun in many locations around the home.

Tenders 39, 4, and 15 also arrived with AFD Tender 421 to facilitate tender shuttle operations. Once an adequate water supply was established a second one and three quarter inch handline was put into use from the same two and a half inch courtyard lay. Alpha Division defensively attacked the fire from the Alpha side of the structure. The State Fire Marshal's Office was notified and briefed at this time. Once safe, and after most of the fire had been extinguished, crews began to enter the now collapsed structure and conduct a primary search. The State Fire Marshal's was again notified and asked to come enroute to the scene for fire origin and cause determination. Extensive overhaul was performed to ensure complete extinguishment of the structure. The primary search turned up one casualty inside the structure. The casualty had been the 911 caller who initially reported the fire. No further discoveries were made with secondary search. Extensive overhaul was performed throughout the night. Polk County Sheriff's Office crime scene responded to the address, along with additional resources from the State Fire Marshal's Office. Polk County Fire Rescue crews performed shift change and E-6 returned to assist with body removal and identification operations. The chimney of the home was pulled down because it had become a safety hazard. Once the PCSO and the State Fire Marshal's investigation was complete, the home was turned over to the owner of the property.

Equipment Used

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Type: GAL - Estimated water used (gallons)	Quantity: 28000	Description: 28000 gallons of water useed.	Apparatus: EN006
Type: GAL - Estimated water used (gallons)	Quantity: 750	Description:	Apparatus: EN023
Type: GAL - Estimated water used (gallons)	Quantity: 750	Description:	Apparatus: SQ007
Type: GAL - Estimated water used (gallons)	Quantity: 6000	Description:	Apparatus: TE004
Type: GAL - Estimated water used (gallons)	Quantity: 12500	Description:	Apparatus: TE039
Type: GAL - Estimated water used (gallons)	Quantity: 7500	Description:	Apparatus: TE015
Type: GAL - Estimated water used (gallons)	Quantity: 250	Description:	Apparatus: BR023

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FIRE RESCUE DIVISION

To: Anthony Stravino, Fire Chief
From: Jeff Calcutt, Battalion Chief
Reference: Preliminary Timeline for Rockridge Road Fire
Date: November 29, 2018

Captain James Williams was interviewed today about the Rockridge Road fatal fire and this is the preliminary timeline that he gave us during the interview. There will be a formal transcript of the interview provided to you at a later date.

19:08:41 All units dispatched to call (Engine 6 at the station)

19:10:05 Engine 6 responding (decision made by Captain Williams to not bring the tender due to possible entrapment because he wanted the firefighter on the engine to attempt a quicker rescue)

19:22:47 Engine 6 on scene after having a difficult time finding the structure. Engine 6 staged the truck at the opening of the driveway going into the house.

From this point, Captain Williams directs his engineer to do a courtyard lay down the driveway for fire attack and directs his firefighter to follow him to the structure to evaluate the fire and attempt a rescue if possible.

Captain Williams stated that there were heavy fire conditions on the Bravo/Charlie side of the structure that included the door area where access would need to be made to enter the house. Captain Williams then proceeds to move to the left attempting to find another access point into the house. He is unsuccessful in going around back due to the fire conditions on the Charlie side. As he attempts to move back towards the alpha side, the power line drops from the alpha/bravo corner of the house. This power line is energized and blocks their attempt to move around the right side of the house. Access into the house is blocked by heavy fire at the bravo side door and a live power line down on the alpha/bravo corner. It is at this point that they assist the engineer with finishing the courtyard lay to start fire attack.

19:26:30 Engine 23 arrives on scene. Captain 23 tries to make access to the house but is unsuccessful.

19:27:05 Caller is screaming and on fire. There is no more contact with the caller after this point.

19:27:36 Defensive attack is announced.

19:27:38 Rescue 6 on scene.

19:29:21 Battalion 1 on scene and assumes command after a face to face with Captain 6.

Detailed History for Fire Event #S183271612 As of 11/26/2018 07:59:04

Output for: F2455

Priority: E1 Signal: 69E06 - RESIDENTIAL(SINGLE)

Location: [REDACTED] twn JEH RD and STONE RIDGE LN

Route Map It

Created:	11/23/2018 19:06:54	CTR42	8420
Entered:	11/23/2018 19:07:31	CTR42	8420
Dispatch:	11/23/2018 19:08:41	CDP7	7890
Enroute:	11/23/2018 19:08:51	PS0210	F25684
Onscene:	11/23/2018 19:22:47	CDP1	7263
Control:	11/24/2018 03:16:27	CDP1	7263
Closed:	11/24/2018 07:48:11	CCP13	7522

ICUnit: BC001 PrimeUnit: BR006 Dispo: COM Signal: 69E06 - RESIDENTIAL(SINGLE)

Agency: PCFR District: TC8(WEST) Zone: 120 RD: 1131A

Case #: FS180087368

XREF: Sheriff Event: #S183271693 Signal: S7 Agency: PCSO ☐ Detail

19:06:54 CREATE Location: [REDACTED], LKN Signal: 69
 Phone: [REDACTED] District: WEST Beat: 1131A
 SigDesc: STRUCTURE FIRE LocDesc: btwn JEH RD and
 STONE RIDGE LN Priority: PA Response: 3EBMD
 Agency: PCFR LocType: S

19:06:54 ALI E911Phn: [REDACTED] E911Add: 14600 ROCKRIDGE
 RD SW SEC, XX E911Src: WRLS

19:07:31 ENTRY

19:07:31 -NPREMS Comment: (NONE)

19:07:38 SELECT

19:07:55 CHANGE Name: None-- [REDACTED] Contact?: None-->Y

19:08:01 PROQA Case#: 4223034 Comment: CC text: Structure Fire
 Caller Statement: REPORTED BUILDING/STRUCTURE
 FIRE

19:08:25 PROQA Case#: 4223034 Classify: 69E06 Comment: CAD
 Response: EN/BC/ALS
 Dispatch Code: 69E06 (Residential (single))
 1. The incident involves a single-family residential
 structure.

19:08:27 CHANGE Signal: 69-->69E06 Priority: PA-->E1
 SigDesc: STRUCTURE FIRE-->RESIDENTIAL(SINGLE)
 Comment: Fire ProQA recommends dispatch at this
 time

19:08:41 DISP **EN006** Operator:F7100 F7390 F18802
OperNames:WALSH,DEREK; GARTRELL,MARY;
DURANTE,ALEXANDER

19:08:41 DISP **EN039** Operator:F18821 F23251 F26596 F18418
F4851 OperNames:MOLNAR,ANDREW;
BROWN,MATTHEW; GREEN,TIMOTHY;
QUINN,COURTNEY R; FORBES,ALFRED

19:08:41 DISP **SQ007** Operator:F5019 F20852 F13421
OperNames:PARNELL,GARRETT; MUSICK.JUSTIN;
SHEEHAN,BRITNEY

19:08:41 DISP **BC001** Operator:F0838
OperNames:GILLEY,JEREMIAH

19:08:41 DISP **MR006** Operator:F26731 F26728 F22403 F25642
F25684 OperNames:SYDENSTRICKER,JONATHAN;
ABELARD,CARL; MUTIS,KELLY;
STEPHENSON,PATRICK; WINTZ,DANIEL

19:08:41 DISP **BC003** Operator:F4710
OperNames:GOROKHOV,YEVGENIY

19:08:41 -PRIU **EN006**

19:08:41 -CASE **EN006** Case#:FS180087368

19:08:41 -HOLD

19:08:51 *ENRTE **MR006**

19:08:54 PROQA **Case#**:4223034 **Classify**:69E06 **Comment**:CAD
Response: EN/BC/ALS
Reconfigure Code: 69E06 (Residential (single))
Suffix: R (Trapped person(s))
2. A single-level structure is involved.
3. Someone is trapped inside the structure.

19:08:59 *ENRTE **SQ007**

19:09:00 CHANGE **Comment**:Fire ProQA reconfigured classification

19:09:11 *ENRTE **EN039**

19:09:15 REDIR **District**:WEST→TC8

19:10:05 ENRTE **EN006**

19:10:07 PROQA **Case#**:4223034 **Classify**:69E06 **Comment**:4. One person
is trapped.
5. The location is: living room

6. The exact location of the fire is: poss roof
7. No one is reported to be injured.

19:10:09 CHANGE **District:**TC8-->WEST **Comment:**Fire ProQA Key Questions

19:10:13 *ENRTE **BC003**

19:10:32 INFO **Comment:**EITHER BACK DOOR OR FRONT DOOR

19:10:35 REDIR **District:**WEST-->TC8

19:10:55 INFO **Comment:**PT IS ON A WALKER AND CAN'T MOVE AS QUICKLY

19:10:58 ENRTE **BC001**

19:11:12 INFO **Comment:**RP ADV THAT HER LUNGS ARE FILLING UP WITH SMOKE

19:12:06 INFO **Comment:**RP ADV THAT SOMETHING SEEMED TO SPLASHED ON HER HEAD

19:13:14 DISPER **TE039**

19:14:54 REQUEST **Rtype:**HCP **ReqReason:**MEDICAL **-Company:**LN5 - **Location:**[REDACTED], LKN

19:14:57 INFO **Comment:**RP ONLY ADV THAT SMOKE IS IN THE HOME BUT SHE CAN'T SEE ANY FLAMES

19:15:12 INFO **Comment:**RP ADV THAT THIS IS A LOG HOME WITH TIN ROOF

19:15:40 MISC **Comment:**TOT LAKELAND ELECTRIC /SB7890

19:15:58 DISP **EN023** **Operator:**F3921 F1204 F18729
OperNames:SHEROUSE,KEITH; JONES,JOE; HARRIS,LEE

19:16:01 ENRTE **EN023**

19:18:19 INFO **Comment:**RP ADV THAT IT IS HARD FOR HER TO GET UP W/O ASSISTANCE

19:18:29 NOTIFY **Notified:**LIFENET ON STANDBY//JH7339

19:19:01 INFO **Comment:**RP IS WORRIED SHE CAN'T GET UP WHILE HAVING THE PHONE IN HER HAND

19:22:38 INFO **Comment:**RP ADV THAT HER DOOR IS UNLOCKED

19:22:47 ONSCN **EN006** **Comment:**LARGE RESIDENTIAL STRUCTURE FIRE,WORKING FIRE, LAST DRIVEWAY BEFORE THE BRIDGE

19:22:52 IC **EN006** **ICUnit:**EN006

19:23:12 INFO **Comment:**RP ADV THAT SHE CAN'T SEE ANYTHING IN THE HOME DUE TO THE SMOKE

19:23:52 NOTIFY **Notified:**SIG PAGE
19:24:27 DISP **TE006**
19:24:33 MISC **Comment:**HEAVY FLAMES AND SMOKE,SETTING UP A
COURTYARD LAY FOR DEFENSIVE ATTACK
19:24:53 MISC **Comment:**ACCOUNTABILITY ON THE ALPHA SIDE OF
THE ENGINE
19:26:21 INFO **Comment:**RP IS IN THE DINING ROOM STILL
19:26:30 ONSCN **EN023**
19:26:43 INFO **Comment:**RP SEES FIRE NOW
19:26:51 MISC **Comment:**HALF INVOLVED AT THIS TIME
19:26:53 INFO **Comment:**RP IS PANICKING
19:27:05 INFO **Comment:**RP IS SCREAMING
19:27:36 MISC **Comment:**DEFENSIVE ATTACK
19:27:38 *ONSCN **MR006**
19:27:42 ONSCN **MR006**
19:28:03 INFO **Name:** [REDACTED] **Contact?:**Y **Comment:**RP IS
NO LONGER RESPONDING TO X37
19:28:20 INFO **Comment:**X37 HEARS FIRE CRACKILING BUT NO
RESPONSE
19:29:21 ONSCN **BC001**
19:29:50 ONSCN **BC003**
19:30:12 *ONSCN **SQ007**
19:30:46 INFO **Comment:**RP STILL NOT RESPONDING TO X37
19:30:56 CHANGE **District:**TC8→WEST **Comment:**Fire ProQA processing
complete
19:30:59 INFO **Comment:**STILL LL
19:31:54 REDIR **District:**WEST→TC8
19:32:07 MISC **Comment:**POWER LINE DOWN ON THE DELTA SIDE
OF THE STRUCTURE
19:33:23 ICX **EN006**
19:33:27 IC **BC001** **ICUnit:**BC001
19:33:47 DISP **TE422**
19:34:03 CLEAR **TE006** **Dispo:**COM
19:34:26 MISC **Comment:**LKLD ELECTRIC JUST ARRIVED
19:34:42 ENRTE **TE422**

19:35:40 ONSCN **EN039**

19:36:54 DISPER **MD231** Operator:F26999 F26883
OperNames:BENTZ,ERIC; DELUCIA,DEVIN
Comment:LINE DEAD NOW//NO FURTHER RESPONSE

19:37:02 INFO

19:37:10 NOMORE

19:37:21 ONSCN **TE039**

19:38:31 DISP **AT019** Operator:F26422
OperNames:PEREZ,ANDREW

19:39:24 MISC **MD231** Comment:TAKING FF ON 231 AND PLACING
THEM ON BR023

19:39:31 MISC Comment:POWER SECURED

19:39:43 MISC Comment:MEDIUM SIZED WOOD FRAM STRUCTURE,
FULLY INV,DEFENSIVE MODE AT THIS TIME, POWER
LINE DOWN ON DELTA SIDE,NO ACCESS TO FIRE
TRUCKS DOWN THIS ROAD,COURTYARD LINE LAID

19:41:34 MISC Comment:CA006 ALPHA SIDE OPERATIONS

19:45:33 ENRTE **AT019**

19:50:02 -ASSOC Service:P Event:**#S183271693** Signal:LAW
Agency:PCSO Comment:LAW NEEDED FOR TRAFFIC
CONTROL

19:50:21 MISC Comment:FIRE STOPPED TO THE WOODS ON THE
BRAVO SIDE, HALF OF STRUCTURE COLLAPSED AT
THIS TIME, TRYING TO STOP FIRE FROM GOING TO
DELTA SIDE TO THE WOODS

19:50:35 ASSOC Service:P Signal:LAW->S50

19:53:02 DISP **TE015**

19:53:02 DISP **TE004**

19:53:33 ENRTE **TE015**

19:54:03 ENRTE **TE004**

19:55:15 DISP **BR023**

19:55:18 ENRTE **BR023**

19:55:21 ONSCN **BR023**

19:55:55 *ONSCN **MD231**

20:03:41 MISC Comment:STANDBYS PER BC007: EN028 - NORTH
LAKELAND / EN005 - ZONE 39 / EN017 - ZONE 5

20:04:54 ONSCN **TE422**

20:07:31 MISC **Comment:**GOOD KNOCKDOWN ON THE FIRE AT THIS TIME

20:16:52 MISC **Comment:**STILL IN DEFENSIVE TACTICAL OPERATION, STILL HEAVY FLAMES FROM THE STRUCTURE,STILL WORKING ON ESTABLISHING PERMANENT WATER SUPPLY,ALL PERSONNEL ACCOUNTED FOR, NO ADDITIONAL RESOURCES NEEDED EXCEPT FOR THE ONES RESPONDING

20:18:57 MISC **Comment:**BR023 BACK OUT ON THE HARD ROAD STAGING

20:19:20 MISC **Comment:**PAR 3 ON THE ALPHA SIDE

20:21:35 MISC **Comment:**DOLLAR STORE NEXT TO CIRCLE K ON WEST END WILL BE WHERE THE CLOSEST HYDRANT IS LOCATED

20:22:23 MISC **Comment:**CLOSEST HYDRANT IS BY CYPRESS LAKES

20:30:39 ONSCN **TE015**

20:42:42 MISC **Comment:**BC001 PHONE CONSULTED WITH SFM'S OFFICE, WILL CALL THEM BACK WHEN NEEDED TO RESPOND TO THE SCENE

20:44:18 MISC **Comment:**HYDRANT AT INTERSECTION OF BIG CYPRESS BLVD/FIRESTONE WAY,ON THE LEFT AS YOU COME IN

20:45:01 ONSCN **TE004**

20:45:36 MISC **Comment:**BRUSH FIRE CONTAINED ON ALPHA/BRAVO SIDE//SMALL BRUSH FIRE MAKING ITS WAY TO THE CHARLIE SIDE

20:48:00 ONSCN **AT019** **Comment:**PER AVL

20:48:09 CONTCT **BC001 EN006 AT019 BC003 BR023 EN023 EN039 MD231 MR006 SQ007**
Timer:300

20:48:09 CONTCT **TE004 TE015 TE039 TE422** **Timer:**300

20:55:12 MISC **Comment:**PAR 5 ALPHA SIDE

21:18:16 MISC **Comment:**VERIZON: 1906 TOWER AT 14600 ROCKRIDGE RD DEVICE IS 1.31 MILES IN A SW DIRECTION: LAT 28.24620 LONG: -81.96320
SUBSCRIBER [REDACTED]

21:18:24 DISPER

21:20:27 MISC FC506 Operator: F2324 F0121
OperNames: VITTON,RAF; BALL,EVERETT
Comment: LAT AND LONG SHOWING NEAR 13616
MICHELLE LEE LOP, LKN

21:22:24 MISC Comment: TE039 IS LEVEL ONE ON THE HARD ROAD

22:15:13 CLEAR TE422

22:17:03 ONSCN FC506

22:26:52 MISC Comment: CONFIRMATION OF ONE DECEASED IN THE
RESIDENCE

22:54:12 CONTCT FC506 Timer: 300

22:59:59 CLEAR TE015

23:50:43 CLEAR FC506 Dispo: COM

[11/24/2018]

01:48:36 CONTCT BC001 EN006 AT019 BC003 BR023
EN023 EN039 MD231 MR006 SQ007
Timer: 300

01:48:36 CONTCT TE004 TE039 Timer: 300

03:16:27 OK BC001 EN006 AT019 BC003 BR023
EN023 EN039 MD231 MR006 SQ007

03:16:27 OK TE004 TE039

03:16:40 MISC Comment: COMPLETING SAVAGE AND OVERHAUL

03:23:34 MISC Comment: EN036 MOVED TO STANDBY FOR POLK
CITY PER BC002 /SB7890

03:27:23 CONTCT BC001 EN006 AT019 BC003 BR023
EN023 EN039 MD231 MR006 SQ007
Timer: 60

03:27:23 CONTCT TE004 TE039 Timer: 60

04:15:47 CLEAR MD231

04:24:40 CLEAR SQ007

04:26:41 CLEAR MR006

04:29:09 CLEAR AT019

04:40:46 CLEAR TE039

04:40:51 CLEAR EN039
04:45:19 CLEAR EN023 Dispo:COM Comment:COM
04:46:15 CLEAR BC003
04:47:23 CLEAR BC001
04:47:23 -ICX BC001
04:50:33 MISC Comment:EN006 STAYING ONSCENE TO PRESERVE
THE CUSTODY OF THE SCENE, FIRE MARSHALL
COMING BACK OUT AT DAYLIGHT, A COUPLE OF
DIFFERENT TRUCKS WILL ROTATE TO HELP
PRESERVE THE CUSTODY OF THE SCENE
05:14:47 CLEAR EN006
05:17:23 CLEAR BR023
05:23:07 CONTCT TE004 Timer:150
05:48:00 CONTCT TE004 Timer:300
05:52:01 ASSOC Service:P Signal:S50-->S7
07:48:11 CLEAR TE004 Dispo:COM
07:48:11 -CLEAR
07:48:11 CLOSE
07:49:57 RO
07:49:59 SELECT
07:50:06 DISP BR006
07:50:06 -PRIU BR006
07:50:06 -HOLD
07:50:08 ONSCN BR006
07:50:19 CONTCT BR006 Timer:60
08:52:07 CONTCT BR006 Timer:60
09:41:41 BACKER EN006 UnitID:BR006 Location:
Operator:F7100 F7390 F18802
OperNames:WALSH,DEREK; GARTRELL,MARY;
DURANTE,ALEXANDER
09:56:18 ONSCN EN006
09:56:43 CONTCT BR006 EN006 Timer:60
11:07:48 CONTCT BR006 EN006 Timer:60

12:09:43 CONTCT BR006 EN006 Timer:90

12:52:14 CLEAR BR006 EN006

12:52:14 -CLEAR

12:52:14 CLOSE

CONTACT INFO:

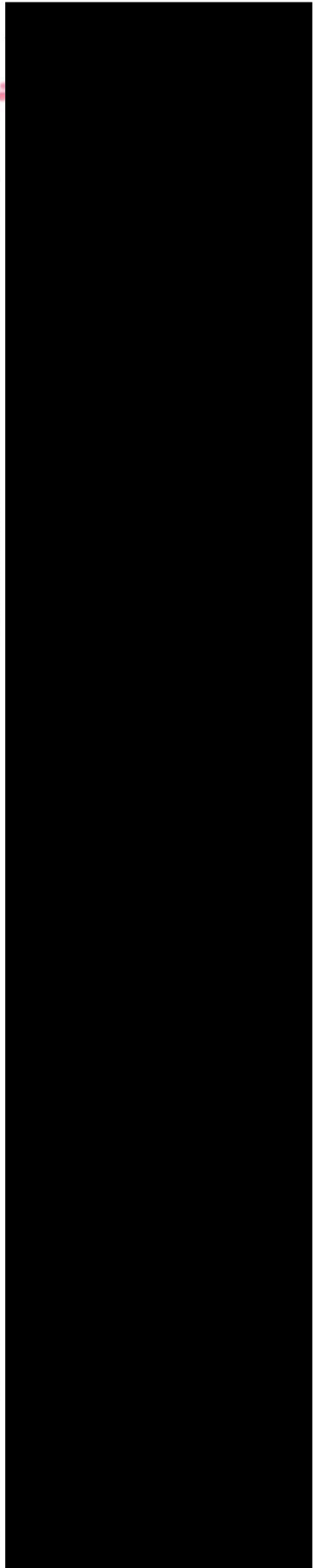
Name	Phone	RPaddr	Contact?	Weapon?	ScnSafe?	CIT?
			Y			
			Y			

My Incident

Monitor

My Status

Admin



17:04:03 AIQ

19:08:41 DISP

19:08:41 -PRIU

19:08:41 -CASE

19:10:05 ENRTE

19:22:47 ONSCN

19:22:52 IC

19:33:23 ICX

20:48:09 CONTCT

[11/24/2018]

01:48:36 CONTCT

03:16:27 OK

03:27:23 CONTCT

05:14:47 CLEAR

#S183271612 Signal: 69E06 CallLoc: 1

Case#: FS180087388

Comment: LARGE RESIDENTIAL STRUCTURE FIRE, WORKING FIRE, LAST DRIVEWAY BEFORE THE BRIDGE

ICUnit: EN006

Timer: 300

Timer: 300

Timer: 60

Signal: 69E06

TS work copy

bing maps

A

B

Polk County Fire Dept-Sta 6

10 min , 7.3 mi

Light traffic
Via Rockridge Rd, US-98

Type your route notes here

A



1. Depart Rockridge Rd toward Jeh Rd

4.6 mi

Turn left onto US-98 / SR-35 / SR-700



2. Shell on the corner

2.7 mi

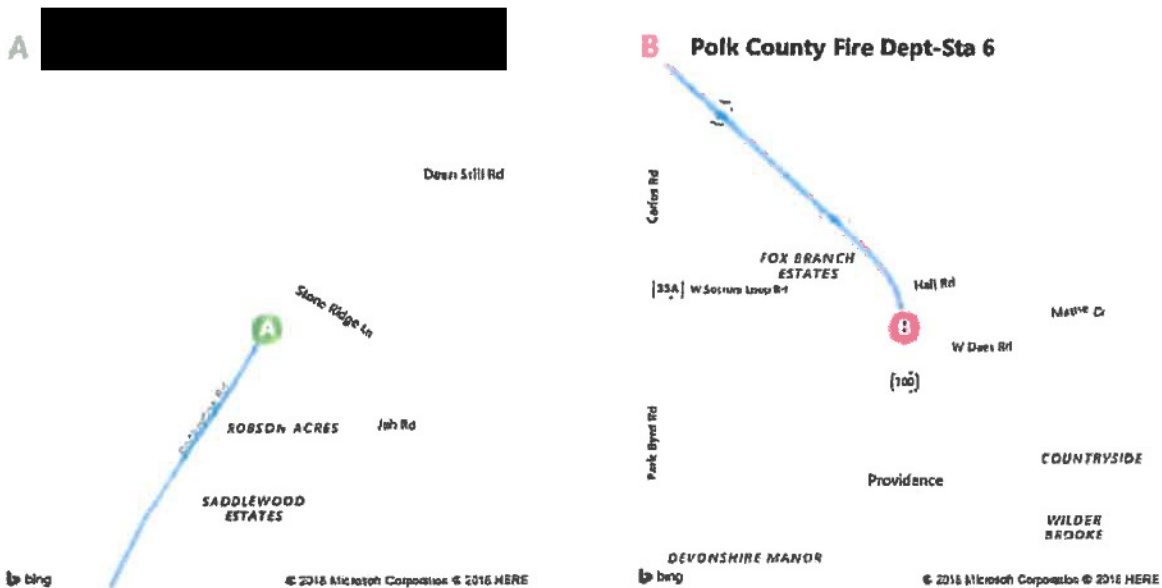
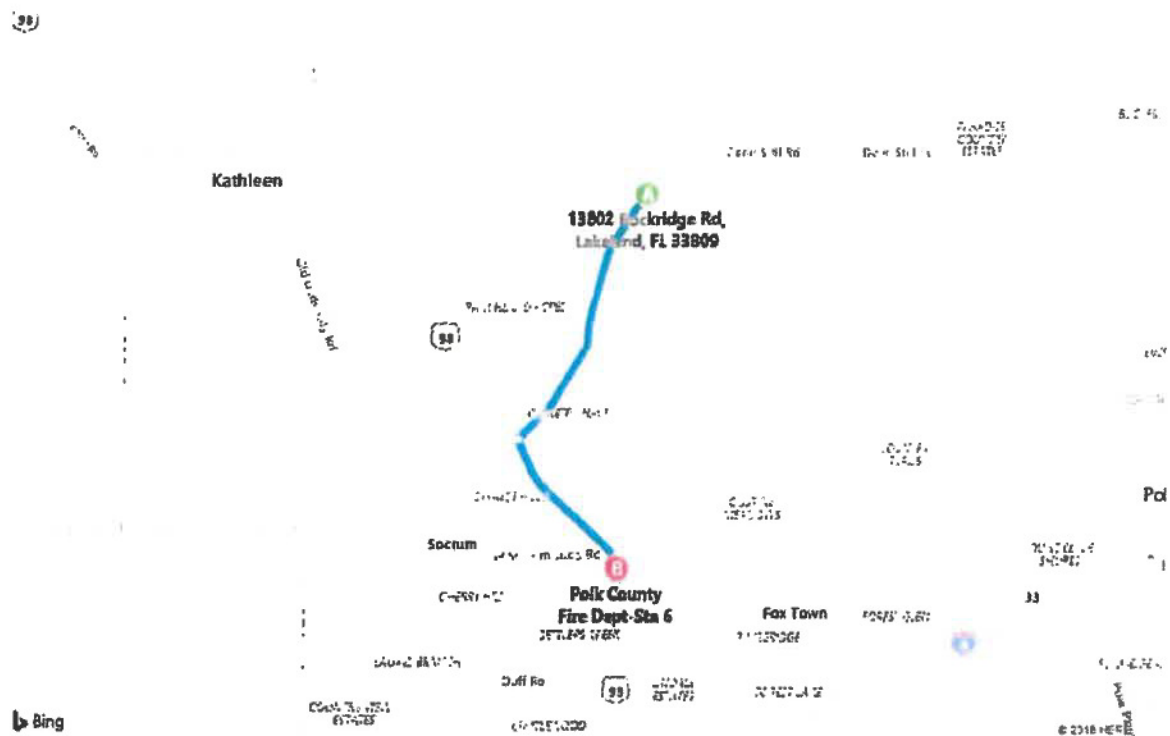
Minor Congestion

Arrive at US-98 S / SR-700 S / SR-35 S

3. If you reach W Dees Rd, you've gone too far

B

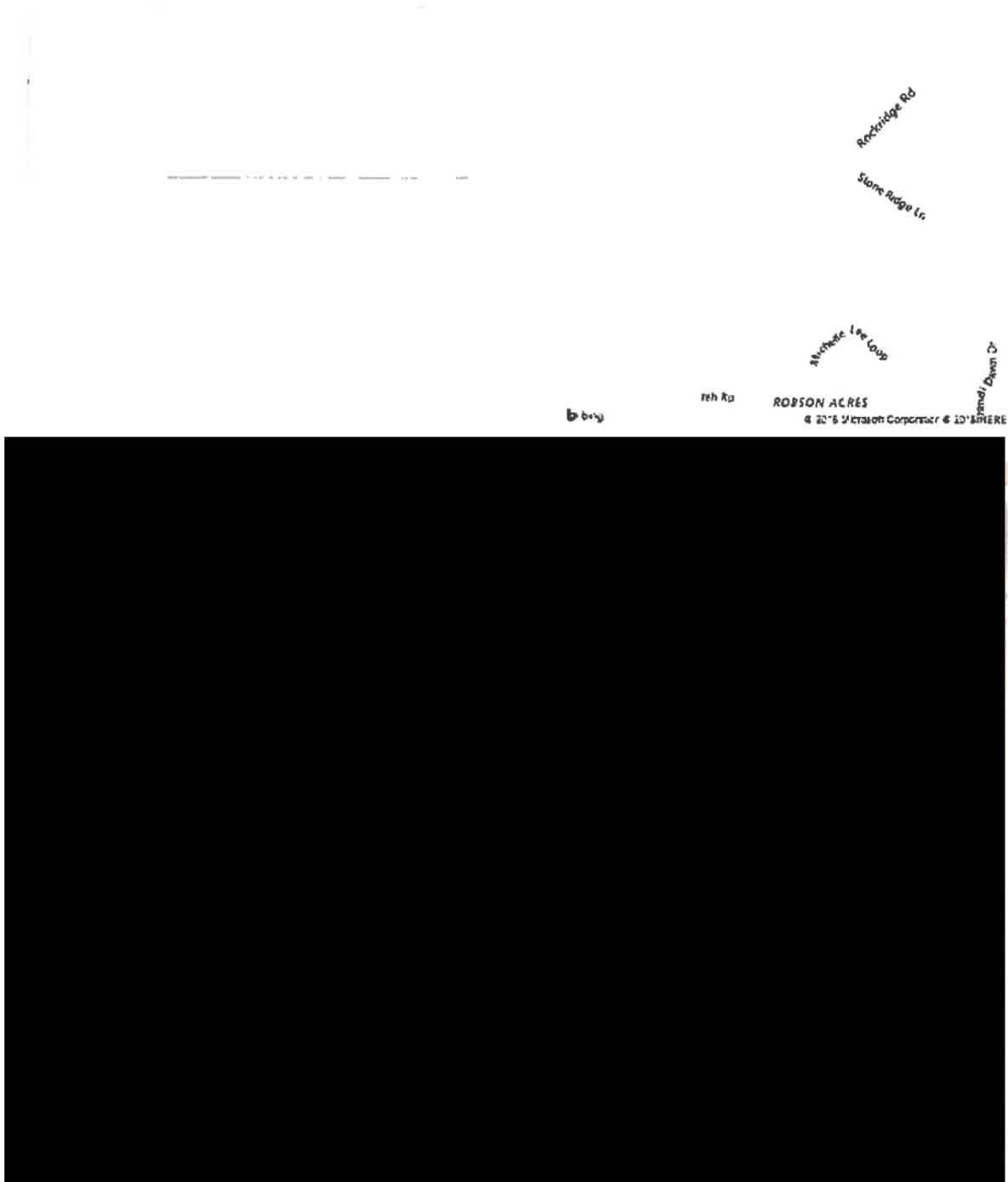
Polk County Fire Dept-Sta 6

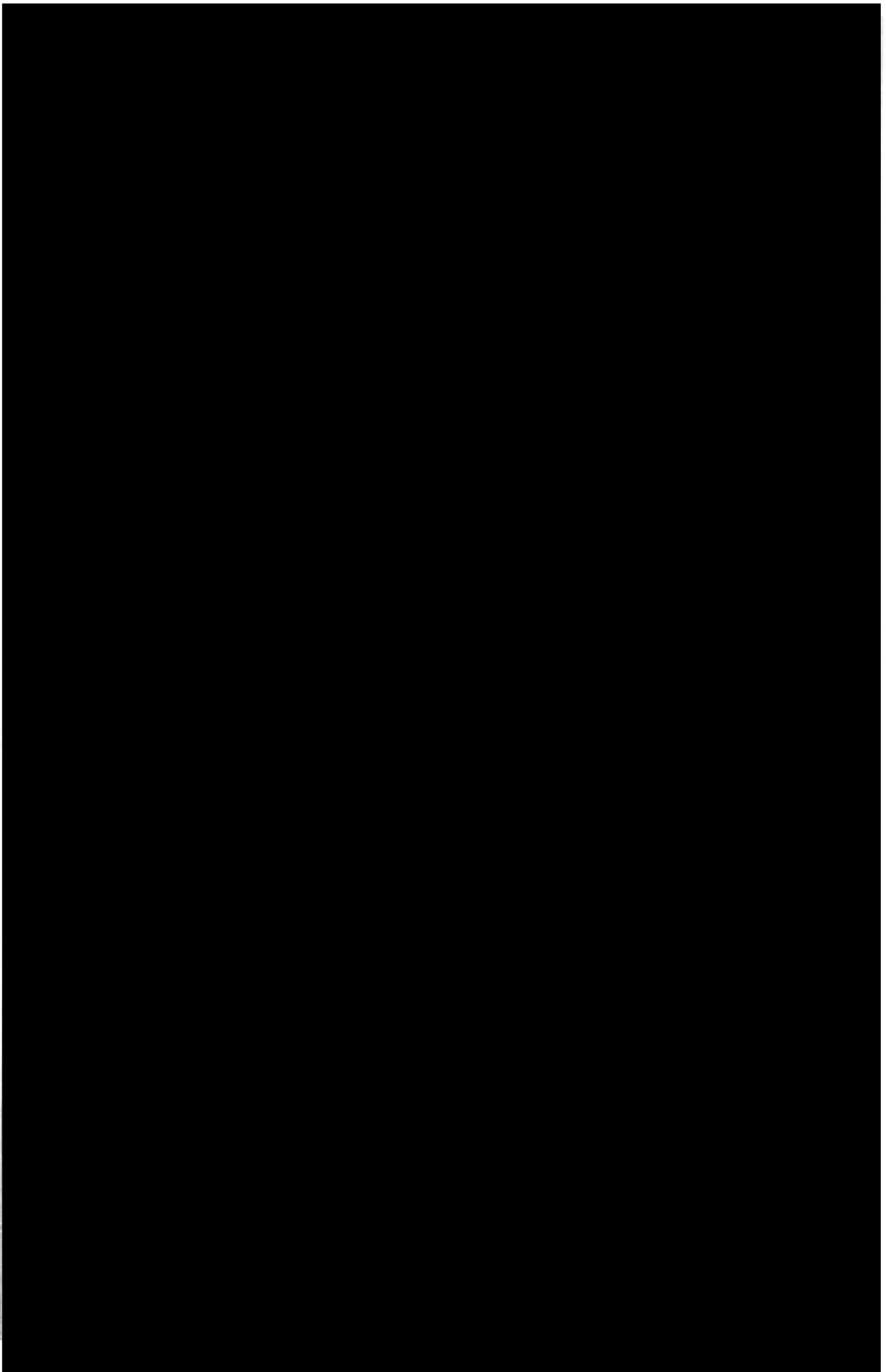


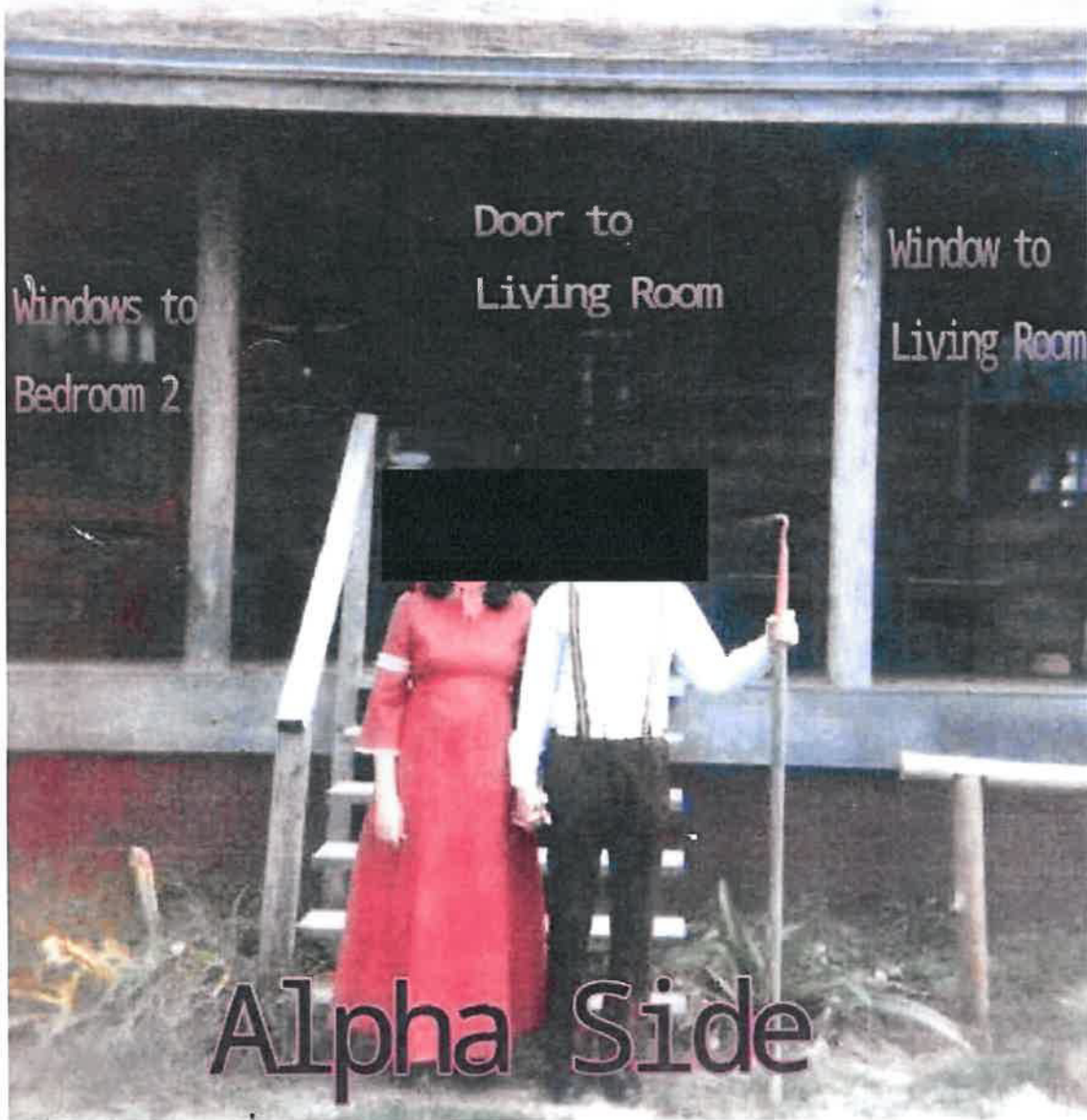
These directions are subject to the Microsoft® Service Agreement and are for informational purposes only. No guarantee is made regarding their completeness or accuracy. Construction projects, traffic, or other events may cause actual conditions to differ from these results. Map and traffic data © 2018 HERE™

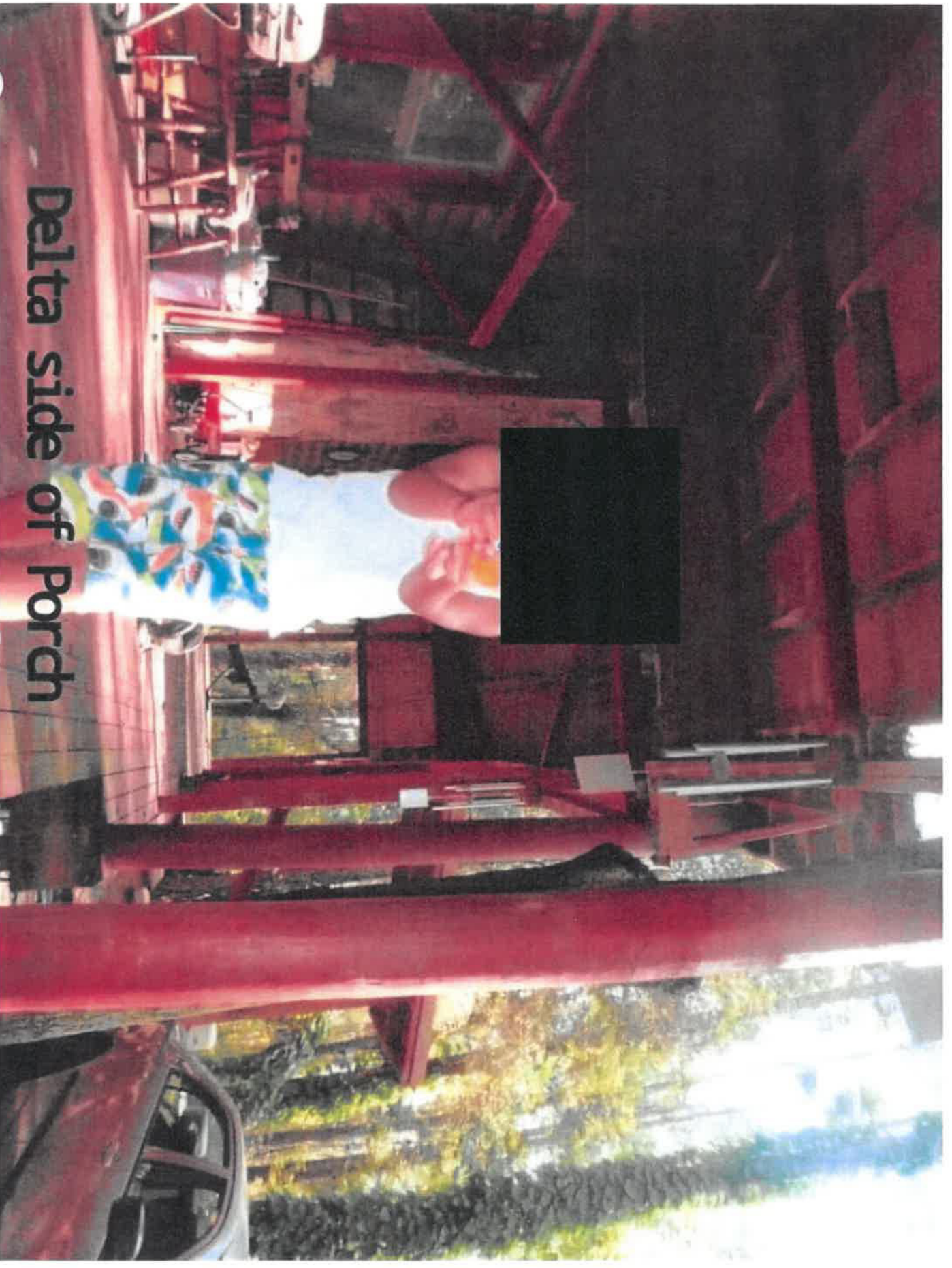
bing maps

Notes

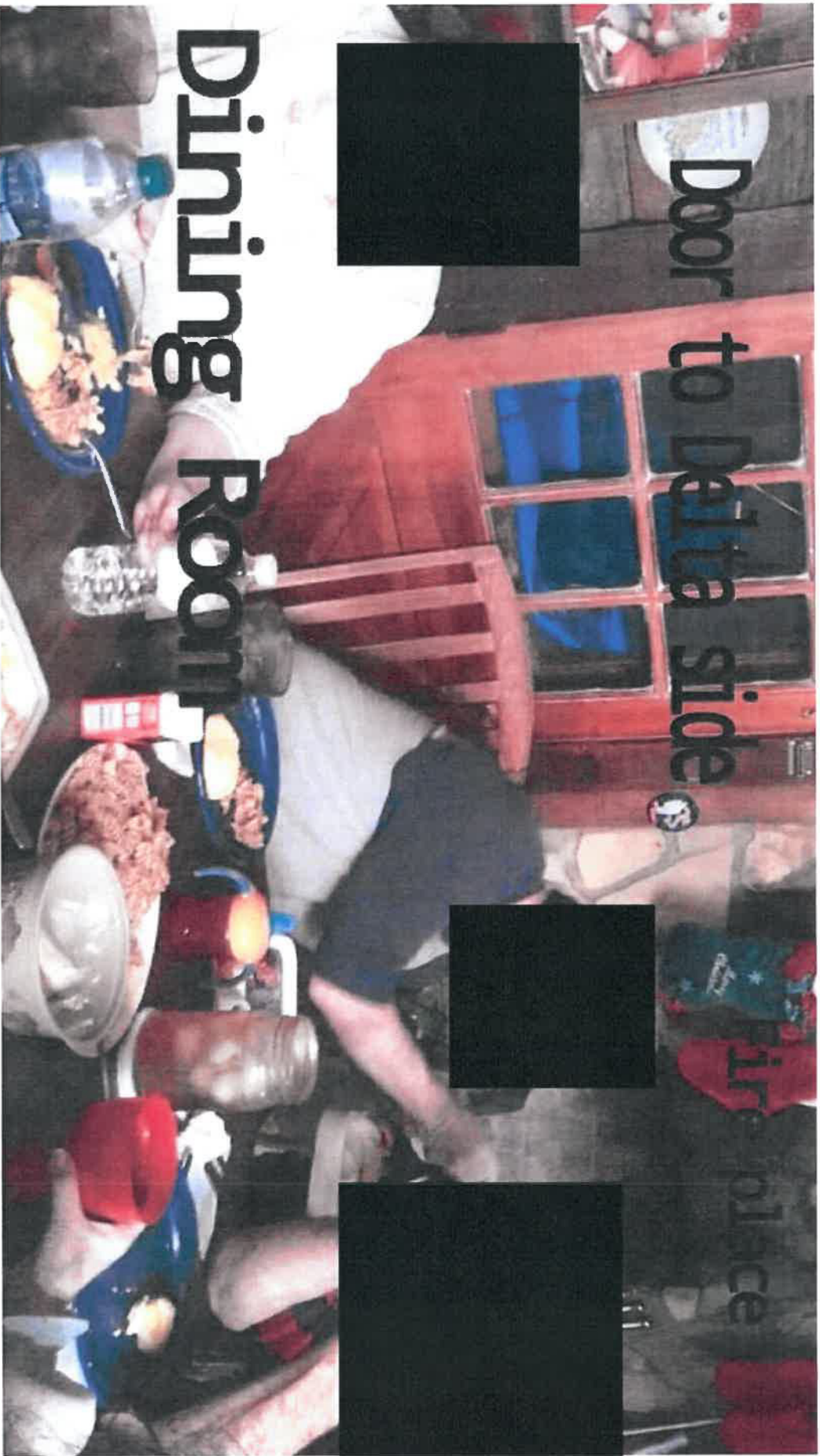




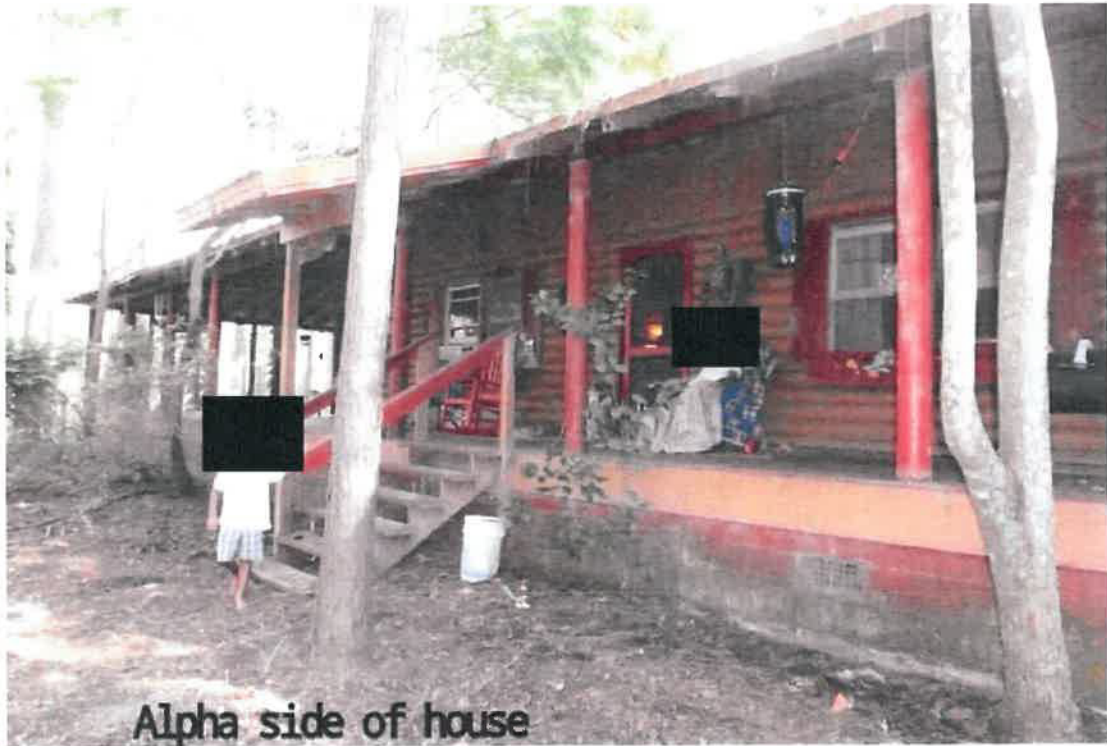




Delta side of Porch









**APPENDIX E: THE INTERNATIONAL ACADEMIES OF EMERGENCY DISPATCH (IAED) FIRE
STANDARDS COUNCIL**

21 February, 2019

Executive Summary
Fatality Structure Fire, Polk Co. FL 23 Nov. 2018

At the request of the Polk County Florida Sheriff's Office Telecommunications Division, representatives of The International Academies of Emergency Dispatch (IAED) Fire Standards Council reviewed records of the 911 call processing detail of a fatality structure fire that occurred in Polk Co. FL on 23 Nov. 2018. The purpose of this review was to determine compliance with general 911 industry best practices as well as any applicable agency, local, state, national and international standards applicable to Fire/Rescue Calltaking/Dispatch.

The records reviewed include both phone and radio traffic from the incident in question, Fire ProQA 911 call taking software data as well as a side by side timeline of the phone and radio traffic created by Polk Co. and taken directly from CAD and the voice recorder.

This document will serve as the IAED step by step review and critique of this 911 call. Review is a list form in chronological order. Recommended actions are listed below each step. General over-all recommendations are listed at the bottom of the document.

Note: all times listed as approximate due to not having direct access to agency voice recorder. IAED Independent timing matches listed agency timing within fractions of seconds.

1. An AQUA QI software review of the call determines the calltaker was partial compliant over-all with the Fire Priority Dispatch System (FPDS) v6.1 (*1 Major Deviation noted in # 6 below) and executed the call with no other deviations.
Recommended Action: See # 6. Below.
2. Call was classified (call typed) at an appropriate **69 Echo 6** (Structure Fire, single residential) level and made available for dispatch approximately 42 seconds after the call was answered. Time to obtain address and phone number was approximately 17 seconds. These call processing times fall well within the recommended parameters of the applicable 2019 NFPA Call Processing Time Standard (60 seconds). (see reference a. below).
3. The calltaker had the option to select the *Caller in Danger not Trapped* instructions while still in in Case Entry when she was told by the caller that "her house was on fire, was alone and she was using a walker". This is permissible per FPDS Case Entry Rules (see reference b. below). It should be noted this was not required by the protocol pathway and its use is a subjective judgement based on the calltakers interpretation of the danger as expressed by the caller. It should also be noted that while in Case Entry, the caller did not state she was inside the structure so a reasonable argument can be made that the danger at that point was unknown. This is statistically very atypical in our experience. *In our opinion, even if this pathway had been selected it would not have changed the outcome of the call, primarily due to the callers later discovered inability to exit the structure.*
Recommended Action: Create and instruct Continuing Education topic for all calltakers concerning possible and appropriate usage of the *Caller in Danger not Trapped* link,

instructions and pathway in Fire ProQA. This should be addressed as a quarterly topic as it will be a seldom used pathway and could well be lifesaving in the right circumstance.

4. Once call was made available for dispatch, calltaker followed the appropriate structure fire call pathway and determined the caller was in the structure. This information became apparent approximately 1 minute 19 seconds after the call was made available for Dispatch. *In review of the call phone traffic audio, it is our opinion a substantial portion of this time was consumed by calltaker data entry/information update tasks (calltaker typing in background with phone conversation gaps).*

Recommended Action: Obtain or create and instruct multi-tasking training topics for all calltakers. Refresh on a quarterly basis.

5. The calltaker obtained the exact location of the caller, confirmed she was alone and attempted to give the caller instructions to exit the structure approximately 32 seconds after it became known the caller was inside the structure. The caller consequently advised she was unable to exit the structure due to her level of disability/immobility.
6. Once the calltaker determined the caller was unable to exit the structure, the calltaker should have selected the *Trapped in Structure Fire* protocol link per FPDS Case Entry Rules (see reference c. below) and given those instructions. The calltaker did not follow that link immediately, she instead followed the *Return to Key Questions* link and finished the Key Questions referencing where the fire was and if anyone was injured. (*Failure to follow protocol link, Major Deviation). Following the *Return to Key Questions* link delayed the provision of the *Trapped in Structure Fire* instructions by approximately 25 seconds. *In our opinion, even if the Trapped in Structure Fire link had been selected and the instructions given 25 seconds earlier, it would not have changed the outcome of the call. This primarily due to the caller's inability to follow any of the instructions even to the point of being unable to get low to the floor.*

Recommended Action: Provide this calltaker constructive feedback and coaching about the use of the *Trapped in Structure Fire* link and pathway in this particular call and all similar calls. This should include Fire ProQA simulation to assist in making the pertinent points. Create and instruct Continuing Education topic for all calltakers concerning possible and appropriate usage of the *Trapped in Structure Fire* link and pathway in Fire ProQA. This should be addressed as a quarterly topic as it will be a seldom used pathway and could well be lifesaving in the right circumstance.

7. The calltaker in this case presents at some points in the call with somewhat of a flat affect (minimal amount of voice inflection) in her dialogue with the caller. This flat affect can affect the perceived rate with which any call is processed. While this might have created a perception of a slower rate with which this call was processed, the call processing time for this call was well within a normal range. On the other end of the spectrum, it is well documented that excessively rapid speech can in fact, cause confusion and non-compliance from a caller under significant stress. There was no indication that this flat affect created a negative customer service situation with this caller or effected the outcome.

Recommended Action: Provide this calltaker constructive feedback and training about the importance of voice inflection when communicating with a 911 caller, particularly a caller under significant stress. A flat affect or lack of voice inflection can create a negative customer service situation with many callers. It can be perceived as a lack of caring by the calltaker.

8. The calltaker in this case used the term “paramedics” more than once when describing the response to this call. While paramedics may well have been part of the response to this call, the primary response was obviously by the Fire Department. This was not a call processing error, it was a verbal error and did not negatively affect this call or caller. It should be noted however, as this kind of verbal error can be picked up on by a caller and result in a negative customer service situation

Recommended Action: Provide this calltaker constructive feedback and coaching about the correct use of terminology both in this particular call and all calls. This kind of verbal error can create a negative customer service situation with many callers. It can be perceived as a lack of attention by the calltaker.

9. The calltaker-caller relationship between this calltaker and caller was quite good in spite of the significant stress both were under. Throughout the call, the calltaker displayed empathy for the caller and her situation and constantly reassured and tried to calm the caller. We believe the caller recognized that and responded in as positive a fashion as could be expected for the situation.
10. The calltaker at more than one point in the call tried very acceptable non-protocol driven methods to try and assist the caller.
 - a. Cover face with wet cloths
 - b. Maintaining constant contact with the caller and verifying exact location inside the structure
 - c. Attempting to obtain husbands, neighbors phone number
 - d. Informing the caller of Fire Department actions

This was necessitated by the caller being unable to exit the structure or follow the *Trapped in Structure Fire* instructions. The calltaker should be commended in that respect for utilizing independent thought and actions in a seldom encountered situation not covered by the Fire Protocol instructions.

11. Although not strictly a calltaking function, this calltaker put information into the call that allowed the dispatcher to air to units numerous times that the caller was trapped in the structure.

Conclusion:

Although the outcome of this incident was tragic, after a thorough review of this incident we do not believe there is anything the calltaker could have done differently to change the outcome. The caller’s inability to exit the structure or move around in the structure or follow the *Trapped in Structure Fire* instructions severely limited what the calltaker could do to assist her. Although the technical processing of this call was not perfect, it was quite good given the extraordinary circumstances that presented themselves. The calltaker should be strongly commended for her empathetic, caring interaction with a caller that would soon be deceased while still on the phone with the calltaker.

References:

- a. NFPA 1221 Chapter 7.4 Operations, 2019 Edition, Section 7.4.3 through 7.4.3.1 and 7.4.3.2
- b. Fire Priority Dispatch System (FPDS) v6.1 Case Entry Rule # 4.
- c. Fire Priority Dispatch System FPDS v6.1 Case Entry Rule # 5.

Over-all Recommendations:

- a. Update agency Fire Priority Dispatch System (FPDS) protocols from v6.1 to v7.0 as soon as it is operationally possible. FPDS 7.0 contains an expanded set of tools and instructions for dealing with callers trapped in structure fires and other life-threatening situations.
- b. Provide mandatory quarterly training for all calltaking staff on low frequency high risk call types. These would include events such as Trapped in Structure Fire, Sinking Vehicle, Vehicle in Floodwater, Building Evacuation, Structure Collapse, Trench Collapse, Trapped by Wildland Fire and others. Any one individual calltaker has the distinct possibility of working for an extended period of time and never having to process one of these low-frequency high-risk incidents in the normal course of their duties. Skillsets for these incidents will degrade even when using a logic-based calltaking software such as ProQA.
- c. Provide yearly training for all calltaking staff on caller management, and the importance of using voice inflection when dealing with 911 callers. A calltakers presentation can positively or negatively affect the outcome of a 911 based on the relationship between the calltaker and the caller.
- d. Provide yearly training for all calltaking staff to develop and maintain multi-tasking skillsets. The ability to multi-task efficiently can save valuable time in situations that are truly life threatening to a caller. It can also vastly improve the calltaker/caller relationship with all calls.

If you have any questions, please feel free to contact us at any time,

Michael Thompson

On behalf of the IAED Fire Council of Standards and Fire/Rescue Special Operations Group

Michael Thompson
IAED Fire Council of Standards
Chair, IAED Fire Council of Standards Research
Chair, IAED Fire Curriculum Board
Medical/Fire Program Administrator PDC
Battalion Chief (Retired)

Brian Dale
Associate Director of Medical Control and Quality processes
IAED Fire Council of Standards
Fire Chief (Retired)

Jay Dornseif
IAED Fire Council of Standards
Fire Program Administrator PDC

**APPENDIX F: PCSO REVIEW OF INTERNATIONAL ACADEMIES OF EMERGENCY DISPATCH (IAED)
FIRE COUNCIL OF STANDARDS AND FIRE/RESCUE SPECIAL OPERATIONS GROUP EXECUTIVE
SUMMARY**

Review of International Academies of Emergency Dispatch (IAED) Fire Council of Standards and Fire/Rescue Special Operations Group Executive Summary

Polk County Sheriff's Office; Bureau of Support Services, Telecommunications Section

The Executive Summary performed by Michael Thompson on behalf of the International Academies of Emergency Dispatch (IAED) Fire Council of Standards and Fire/Rescue Special Operations Group reached the following conclusion:

"Although the outcome of this incident was tragic, after a thorough review of this incident we do not believe there is anything the call taker could have done differently to change the outcome. The caller's inability to exit the structure or move around in the structure or follow the *Trapped in Structure Fire* instructions severely limited what the call taker could do to assist her. Although the technical processing of this call was not perfect, it was quite good given the extraordinary circumstances that presented themselves. The call taker should be strongly commended for her empathetic, caring interaction with the caller that would soon be deceased while still on the phone with the call taker."

We agree with this conclusion.

This review of the Executive Summary is meant to include further and more specific discussion related to IAED's step by step review and critique.

1. An AQUA QI software review of the call determines the call taker was partial compliant overall with the Fire Priority Dispatch System (FPDS) v6.1 (*1 Major Deviation noted in # 6 below) and executed the call with no other deviations.

Recommended Action: See # 6. Below.

We agree with this finding. The "major deviation" referenced here relates to an approximate 25 *second delay* in selecting a link on the DLS (right) side of the screen entitled "Trapped in Building Fire (1st Party)." This was early in the call, at approximately 19:09:48 and approximately 56 seconds after the update of "Trapped person(s)" had been sent in CAD (Computer Aided Dispatch). At the time the call taker selected the highlighted link with a red arrow next to it entitled "Go to KQs" (KQs means "Key Questions"). At 19:09:27 the dispatcher reiterated the "Trapped person(s)" information that was sent via CAD. See "Image 1." After our review of the Executive Summary, and our analysis of the call, in our opinion the highlighted link with a red arrow influenced the call taker's decision to return to "Key Questions" at the time she made the decision. Approximately 25 seconds later the call taker made the appropriate selection and began providing the instructions "Trapped in Building Fire (1st Party)." The executive summary concluded that *"...after a thorough review of this incident we do not believe there is anything the call taker could have done differently to change the outcome."* This includes the deviation referenced here. Later in the executive summary, IAED concluded: *"In our opinion, even if the Trapped in Structure Fire link had been selected and the instructions given 25 seconds earlier, it would not have changed the outcome of the call. This primarily due*

to the caller's inability to follow any of the instructions even to the point of being unable to get low to the floor."

Image 1

The screenshot displays the 'Paramount for Fire' software interface. At the top, the title bar reads 'Paramount for Fire (5.1.1.27 - 7/12/2018)'. Below the title bar is a menu bar with options: File, View, Specialty, Options, Tools, Version, About Param. A toolbar with various icons is located below the menu bar. The main interface is divided into several sections. On the left, there is a '69: Structure Fire' entry field. Below this, there are tabs for 'Entry', 'KQ', 'PDNCEI', 'DLS', and 'Summary'. The 'Entry' tab is selected, showing a list of instructions: 'a. I'm sending the fire department to help you now. Stay on the line, and I'll tell you exactly what to do next', 'b. (inside building or appropriate) If it's safe to do so, leave the building, close the doors behind you, and remain outside', 'c. Do not try to put the fire out.', and 'd. Do not carry out anything that is on fire'. Below these instructions is a 'Critical EFD Information' section with a blue background, containing a list of instructions: 'Suspend questioning when necessary to give safety PDIs, and then return to sequence', 'Notify responders of any confirmed ENTRAPMENT', 'Advise the caller and responders of potential hazards', and 'Provide responders with any known information about the location and number of people trapped in danger'. On the right side, there is a 'DLS Links' section with a list of buttons: 'Go to KQs', 'X-Card', 'Trapped in Building Fire (1st Party)', 'Caller Danger - Not Trapped', 'Person on Fire', 'Danger Present - HAZMAT', 'Stay on the Line', and 'Urgent Disconnect'. At the bottom of the interface, there is a status bar showing 'FPDS 6.179 3/20/2018 24867', 'Q. NAE C. NAE', and a message: 'You are responding to a Structure Fire Residential (single) (Trapped person(s)) Code 69-E-6R'.

2. Call was classified (call typed) at an appropriate 69 Echo 6 (Structure Fire, single residential) level and made available for dispatch approximately 42 seconds after the call was answered. Time to obtain address and phone number was approximately 17 seconds. These call processing times fall well within the recommended parameters of the applicable 2019 NFPA Call Processing Time Standard (60 seconds). (see reference a. below).

We agree with this finding. The call was answered at 19:06:54. The call was sent to fire pagers at 19:07:31. The dispatcher toned the call at 19:08:28 and then verbally dispatched the call. The call was updated from a structure fire, single residential to a residential structure fire with a trapped person (entrapment) at 19:08:54.

3. The call taker had the option to select the Caller in Danger not Trapped instructions while still in in Case Entry when she was told by the caller that "her house was on fire, was alone and she

was using a walker.” This is permissible per FPDS Case Entry Rules (see reference b. below). It should be noted this was not required by the protocol pathway and its use is a subjective judgement based on the call taker’s interpretation of the danger as expressed by the caller. It should also be noted that while in Case Entry, the caller did not state she was inside the structure so a reasonable argument can be made that the danger at that point was unknown. This is statistically very atypical in our experience. In our opinion, even if this pathway had been selected it would not have changed the outcome of the call, primarily due to the callers later discovered inability to exit the structure.

Recommended Action: Create and instruct Continuing Education topic for all call takers concerning possible and appropriate usage of the Caller in Danger not Trapped link, instructions and pathway in Fire ProQA. This should be addressed as a quarterly topic as it will be a seldom used pathway and could well be lifesaving in the right circumstance.

We agree with this finding and the recommended training. The recommended training is being incorporated into telecommunicator training.

4. Once call was made available for dispatch, call taker followed the appropriate structure fire call pathway and determined the caller was in the structure. This information became apparent approximately 1 minute 19 seconds after the call was made available for Dispatch. In review of the call phone traffic audio, it is our opinion a substantial portion of this time was consumed by call taker data entry/information update tasks (call taker typing in background with phone conversation gaps).

Recommended Action: Obtain or create and instruct multi-tasking training topics for all call takers. Refresh on a quarterly basis.

We agree with this finding and the recommended training. Overall, according to the executive summary, the *“call processing time for this call was well within a normal range.”* We agree. Effective call takers must strike a balance between receiving and providing information important to the call, passing on that information through CAD and through the dispatcher, while maintaining a genuine relationship with the caller. We believe this occurred with the call. Elsewhere in the Executive Summary concludes: *“The call taker-caller relationship between this call taker and caller was quite good in spite of the significant stress both were under. Throughout the call, the call taker displayed empathy for the caller and her situation and constantly reassured and tried to calm the caller. We believe the caller recognized that and responded in as positive a fashion as could be expected for the situation.”*

Through training we will reinforce “Multi-tasking: Per IAED Case Review Performance Standards” - The call taker avoids unnecessary gaps by telling the caller what s/he is doing and what is going to happen next. When gaps cannot be avoided, the call taker explains why there will be a short lull in the conversation.

5. The call taker obtained the exact location of the caller, confirmed she was alone and attempted to give the caller instructions to exit the structure approximately 32 seconds after it became known the caller was inside the structure. The caller consequently advised she was unable to exit the structure due to her level of disability/immobility.

We agree with this finding.

6. Once the call taker determined the caller was unable to exit the structure, the call taker should have selected the Trapped in Structure Fire protocol link per FPDS Case Entry Rules (see reference c. below) and given those instructions. The call taker did not follow that link immediately, she instead followed the Return to Key Questions link and finished the Key Questions referencing where the fire was and if anyone was injured. (*Failure to follow protocol link, Major Deviation). Following the Return to Key Questions link delayed the provision of the Trapped in Structure Fire instructions by approximately 25 seconds.

In our opinion, even if the Trapped in Structure Fire link had been selected and the instructions given 25 seconds earlier, it would not have changed the outcome of the call. This primarily due to the caller's inability to follow any of the instructions even to the point of being unable to get low to the floor.

Recommended Action: Provide this call taker constructive feedback and coaching about the use of the Trapped in Structure Fire link and pathway in this particular call and all similar calls. This should include Fire ProQA simulation to assist in making the pertinent points. Create and instruct Continuing Education topic for all call takers concerning possible and appropriate usage of the Trapped in Structure Fire link and pathway in Fire ProQA. This should be addressed as a quarterly topic as it will be a seldom used pathway and could well be lifesaving in the right circumstance.

We agree with this finding and agree with the recommended training.

We agree with this finding. The "major deviation" referenced here relates to an approximate 25 second delay in selecting a link on the DLS (right) side of the screen entitled "Trapped in Building Fire (1st Party)." This was early in the call, at approximately 19:09:48 and approximately 56 seconds after the update of "Trapped person(s)" had been sent in CAD (Computer Aided Dispatch), and 12 minutes and 40 seconds prior to PCFR (Polk County Fire Rescue) arriving at the scene. At the time the call taker selected the highlighted link with a red arrow next to it entitled "Go to KQs" (KQs means "Key Questions"). See "Image 1." After our review of the Executive Summary, and our analysis of the call, it is our opinion the highlighted link with a red arrow influenced the call taker's decision to return to "Key Questions" at the time she made the decision. Approximately 25 seconds later the call taker made the appropriate selection and began providing the instructions "Trapped in Building Fire (1st Party)."

In reference to the approximate 25 second delay in the call and the call taker following the appropriate protocol link, these specific series of actions took place: After being prompted by the FPDS ProQA software to ask Key Question "Is anyone trapped inside the building?", the call taker was then prompted by the FPDS ProQA software to ask two additional Key Questions. After asking the two additional Key Questions, the call taker was taken to FPDS ProQA software screen (replicated) pictured below, "Image 1." Once the call taker was presented with the screen pictured (Image 1), the call taker provided Post-Dispatch Instructions "I'm sending the fire department to help you now. Stay on the line, and I'll tell you exactly what to do next" and "If it's safe to do so, leave the building, close the doors behind you and remain outside."

At this time the caller advised that she was not able to exit the structure. The call taker then selected the DLS Link labeled “Go to KQs” in order to ask the remainder of the FPDS Key Questions. Per the FPDS Case Entry Rule # 6 “When, before finishing Key Questions, you are directed to dispatch and go to DLS, provide all applicable PDIs (Post-Dispatch Instructions) from Protocols A, B, and C (red and blue links), and return to questioning when possible.” Instead of selecting “Go to KQs” the call taker’s selection should have been “Trapped in Building Fire (1st Party).” Though as referenced above, the call taker noticed that “Go to KQs” was highlighted in blue with a red arrow next to it, and the call taker selected that protocol link out of habit/high-frequency previous selections. After spending approximately 25 seconds asking Key Questions “Where exactly is the fire?” and “Is anyone injured?” (questions that needed to be asked, regardless) the call taker was then taken to the FPDS ProQA software screen (replicated) pictured below (Image 2). The call taker selected the “Trapped in Building Fire (1st Party)” link.

Image 2

Paramount for Fire (3.1.1.27 - 7/12/2018)

File View Spec Logs Options Tabs Version About ProQA

09: Structure Fire 69-E-6R

Entry KQ PD/CEI DLS Summary

Additional Information

a. I'm sending the fire department to help you now. Stay on the line and I'll tell you exactly what to do next.

b. (Inside building or Appropriate) If it's safe to do so, leave the building, close the doors behind you, and remain outside.

c. Do not try to put the fire out.

d. Do not carry out anything that is on fire.

Critical EFD Information

- Suspend questioning when necessary to give safety PDIs, and then return to sequence.
- Notify responders of any confirmed **ENTRAPMENT**.
- Advise the caller and responders of potential hazards.
- Provide responders with any known information about the location and number of people trapped in danger.

DLS Links

- X-Card
- Trapped in Building Fire (1st Party)
- Caller Danger - Not Trapped
- Person on Fire
- Danger Present - HAZMAT
- Stay on the Line
- Urgent Disconnect

FPDS 6179 3/26/2018 24887

O NAE
C NAE

You are responding to a Structure Fire Residential (single) (Trapped person(s)) Code: 69-E-6-R

Regarding this issue of the highlighted “Go to KQs” link with the red arrow, we have discussed this with the Priority Dispatch Corporation staff—in fact, they brought this to our attention. They are reviewing this issue on their end and have acknowledged that this might have led to a misunderstanding regarding the link selection. Regardless, we agree with their finding that the

appropriate “Trapped in Building Fire (1st Party)” *should have been selected 25 seconds earlier in the call.*

The executive summary concluded that “...after a thorough review of this incident we do not believe there is anything the call taker could have done differently to change the outcome.” This includes the deviation reference here. Later in the executive summary, IAED concluded: “In our opinion, even if the Trapped in Structure Fire link had been selected and the instructions given 25 seconds earlier, it would not have changed the outcome of the call. This primarily due to the caller’s inability to follow any of the instructions even to the point of being unable to get low to the floor.”

7. The call taker in this case presents at some points in the call with somewhat of a flat affect (minimal amount of voice inflection) in her dialogue with the caller. This flat affect can affect the perceived rate with which any call is processed. While this might have created a perception of a slower rate with which this call was processed, the call processing time for this call was well within a normal range. On the other end of the spectrum, it is well documented that excessively rapid speech can in fact, cause confusion and non-compliance from a caller under significant stress. There was no indication that this flat affect created a negative customer service situation with this caller or effected the outcome.

Recommended Action: Provide this call taker constructive feedback and training about the importance of voice inflection when communicating with a 911 caller, particularly a caller under significant stress. A flat affect or lack of voice inflection can create a negative customer service situation with many callers. It can be perceived as a lack of caring by the call taker.

We agree with this finding and the training recommendation. Striking the proper balance between a calm and even-toned response to convey professionalism while maintaining a composed tone, and expressing oneself through more voice inflection and a more varied tone is important skill set for any call taker. It is important to avoid excessively rapid speech or other highly emotive speech that may lead to confusion from the caller and/or non-compliance with the caller. We agree with the Executive Summary finding that “there was no indication that this flat affect created a negative customer service situation with this caller or effected the outcome.” Further we agree that “The call taker-caller relationship between this call taker and caller was quite good in spite of the significant stress both were under. Throughout the call, the call taker displayed empathy for the caller and her situation and constantly reassured and tried to calm the caller. We believe the caller recognized that and responded in as positive a fashion as could be expected for the situation.”

8. The call taker in this case used the term “paramedics” more than once when describing the response to this call. While paramedics may well have been part of the response to this call, the primary response was obviously by the Fire Department. This was not a call processing error, it was a verbal error and did not negatively affect this call or caller. It should be noted however, as this kind of verbal error can be picked up on by a caller and result in a negative customer service situation

Recommended Action: Provide this call taker constructive feedback and coaching about the correct use of terminology both in this particular call and all calls. This kind of verbal

error can create a negative customer service situation with many callers. It can be perceived as a lack of attention by the call taker.

We agree with this finding and the recommended action.

9. The call taker-caller relationship between this call taker and caller was quite good in spite of the significant stress both were under. Throughout the call, the call taker displayed empathy for the caller and her situation and constantly reassured and tried to calm the caller. We believe the caller recognized that and responded in as positive a fashion as could be expected for the situation.

We agree with this finding.

10. The call taker at more than one point in the call tried very acceptable non-protocol driven methods to try and assist the caller.

- a. Cover face with wet cloths
- b. Maintaining constant contact with the caller and verifying exact location inside the structure
- c. Attempting to obtain husbands, neighbors phone number
- d. Informing the caller of Fire Department actions

This was necessitated by the caller being unable to exit the structure or follow the Trapped in Structure Fire instructions. The call taker should be commended in that respect for utilizing independent thought and actions in a seldom encountered situation not covered by the Fire Protocol instructions.

We agree with this finding.

11. Although not strictly a call-taking function, this call taker put information into the call that allowed the dispatcher to air to units numerous times that the caller was trapped in the structure.

We agree with this finding. There are 21 instances via CAD and radio traffic that entrapment is indicated in this call, 8 via radio traffic, 13 via CAD, 12 prior to PCFR arrival:

19:08:54 [CAD] Call reclassified to trapped person

19:09:27 [Radio] "someone trapped inside structure" Engine 6: copy

19:09:45 [Radio] "we are advised that there is someone trapped inside the structure" TAC 8 responding

19:10:44 [Radio] "there is someone trapped inside of the structure" / understood / Batt 1

19:10:55 [CAD] "PT is on a walker and can't move as quickly"

19:11:12 [CAD] "RP adv that her lungs are fulling up with smoke"

19:12:02 [Radio] "we've got the caller advising the patient that's trapped in the house is on a walker and can't move as quickly as regular"

19:12:06 [CAD] "RP adv that something seemed to splashed on her head"

19:12:54 [Radio] "At this time we've got a patient apparently trapped inside of the house"

19:14:57 [CAD] "RP adv that smoke is in the home but she can't see any flames"

19:18:19 [CAD] "RP adv that it is hard for her to get up w/o assistance"

19:19:01 [CAD] "RP is worried she can't get up while having the phone in her hand"

19:22:08 Engine 6 on scene

19:22:38 [CAD] "RP adv that her door is unlocked"

19:23:12 [CAD] "RP adv that she can't see anything in the home due to smoke"

19:25:30 [Radio] "We advised that there is someone that was trapped inside of the structure" /copy that

19:26:21 [CAD] "RP is in the dining room still"

19:26:43 [CAD] "RP sees fire now"

19:26:53 [CAD] "RP is panicking"

19:26:53 [CAD] "RP is screaming"

19:30:29 [Radio] "Command, we are still landline there is somebody inside the structure" /copy that

19:31:06 [Radio] "Command, it's going to be an elderly person—she's in the kitchen"

19:37:02 [CAD] "Line dead now / no further response"

**APPENDIX G: TEXT FROM PCSO TRAINING BULLETIN: 18-12-0001
ISSUED ON 12/17/2018**



TELECOMMUNICATIONS TRAINING BULLETIN

Authority:
Prepared by:

Date: 12/17/2018

Structure Fire with Entrapment

Bulletin: 18-12-0001

REVISED

Often situations involving the use of Emergency Fire Dispatch Protocol 69 (Structure Fire), the caller reporting the structure fire are no longer in the building/structure, able to escape the building/structure, or are not directly involved. In these situations, the Emergency Fire Dispatch (EFD) Protocol should be followed as designed.

In rare circumstances, the 1st party caller may be trapped inside the building/structure. If this occurs, every attempt must be made to get the caller out of danger. EFD Protocol 69 should be followed to include: asking all appropriate Case Entry Questions, Key Questions, providing all possible and appropriate Post-Dispatch Instructions, and linking to panel B-1 to provide 'Trapped in Building Fire (1st party)' instructions. If the caller is still unable to exit the building/structure after all PDI/PAI/DLS instructions have been provided, the call taker must provide EFD Protocol 69 PD1b "If it's safe to do so, leave the building, close the doors behind you, and remain outside." every 30 seconds until the caller exits the building or the call is complete.

If while on the call it is determined that the fire department is unable to make entry, and all other means of assistance have been exhausted, the caller must be told to exit the building immediately. If the caller is unsure on how to escape, they must be told to use any means necessary to get out of the structure. In these situations, once protocol is complete, the call taker must tell the caller "Help is unable to reach you. You have to get out of the house now, and use any means necessary to do so." This phrase must be repeated every 30 seconds until the caller exits the building or the call is complete.

In addition to the above steps, a supervisor must be notified of the situation. Once notified, the supervisor must sit at the position with the call taker and monitor the call to assist when necessary.

APPENDIX H: ORDINANCE ESTABLISHING A UNIFORM ROADWAY ADDRESS SYSTEM

ORDINANCE 04-89

AN ORDINANCE ESTABLISHING A UNIFORM ROADWAY ADDRESS SYSTEM; ESTABLISHING AN ENHANCED 9-1-1 ADDRESSING OFFICE; ESTABLISHING A ROADWAY NAMING SYSTEM; PROVIDING DIRECTIONS FOR POSTING ROADWAY NAMES; ESTABLISHING A BUILDING NUMBERING PLAN IN THE UNINCORPORATED AREAS OF POLK COUNTY; PROVIDING DIRECTIONS FOR POSTING BUILDING NUMBERS; ESTABLISHING A GRID SYSTEM FOR ROADWAY NAMING AND BUILDING NUMBERING; ESTABLISHING THE REQUIREMENTS FOR LOT NUMBERING AND POSTING OF MOBILE HOME PARKS AND RV PARKS; PROVIDING PENALTIES FOR VIOLATING THIS ORDINANCE; PROVIDING FOR THE ADOPTION OF AN ENHANCED 9-1-1 PROCEDURES MANUAL; RECOGNIZING THE AUTHORITY OF THE BOARD OF COUNTY COMMISSIONERS UNDER F.S. SECTION 336.05; PROVIDING FOR THE CODIFICATION OF THIS ORDINANCE; PROVIDING FOR THE CODIFICATION; PROVIDING FOR SEVERABILITY; SUPERSEDING ALL PREVIOUSLY ADOPTED CONFLICTING PROVISIONS; REPEALING ORDINANCES 90-38 AND 00-27; AND PROVIDING AN EFFECTIVE DATE.

WHEREAS there is a need for a complete inventory and improved uniformity of roadway names and building numbers in Polk County; and

WHEREAS the "Enhanced 9-1-1- Emergency Telephone System" is intricately intertwined, related to, and dependent upon a verified roadway naming and building numbering system, and

WHEREAS the Standard Fire Prevention Code, adopted by Polk County, provides that "approved numbers or addresses shall be provided for all new and existing buildings so that the number or address is plainly legible from the roadway", and

WHEREAS it would be beneficial to insure consistent roadway naming and building numbering at the development stage as well as after buildings are constructed; and

WHEREAS an "Enhanced 9-1-1 Emergency Telephone System" serves to promote, protect, and enhance the health, safety and welfare of the citizens of Polk County, Florida; and

WHEREAS an improved system of roadway naming and building numbering would facilitate and enhance the smooth operation of the "Enhanced 9-1-1 Emergency Telephone System," and

WHEREAS Section 336.05, Florida Statutes, authorizes the Polk County Commissioners to name and rename streets and roads, except state roads lying outside the boundaries of any incorporated municipality, and regulate the naming of streets or roads in recorded subdivision plats; and

WHEREAS Section 365.171, Florida Statutes, provides for the implementation of a 9-1-1 emergency communication system within the confines of the county; and

WHEREAS it is necessary and critical that certain regulations, requirements, and information within the purview of the municipalities be transmitted to the county in a timely manner in order to maintain an effective 9-1-1 Emergency Number System throughout Polk County, Florida; and

WHEREAS the Board of County Commissioners of Polk County has determined that it is in the best interest of the public and would enhance the health, safety and welfare of the citizens of Polk County to establish and implement a uniform roadway address system which would provide for greater uniformity and consistency in roadway naming and building numbering in the unincorporated areas of Polk County, Florida, by requiring that every building (including mobile homes) in the unincorporated areas of Polk County have an approved address number, and to require that all public roadways and qualified private roadways have assigned roadway names;

NOW THEREFORE, BE IT ORDAINED BY THE BOARD OF COUNTY COMMISSIONERS OF POLK COUNTY, FLORIDA:

SECTION 1: PURPOSE.

This ordinance is adopted for the purpose of providing a Uniform Roadway Address System for greater uniformity and consistency in roadway naming and for the assignment of address numbers to buildings and structures located on, or with access from, officially named public and private roadways in the unincorporated areas of Polk County, Florida, and is in the interest of the public health, safety and general welfare of the citizens and inhabitants of Polk County.

SECTION 2: SHORT TITLE.

This Ordinance shall be known and may be cited as the "Uniform Roadway Address System Ordinance."

SECTION 3: DEFINITIONS.

- (a) Accessory Building: A structure which is customarily associated with subordinated in size and incidentally in use to the principal structure and located on the same site.
- (b) Address Numbering Maps: A master set of maps which, in conjunction with approved plats, depicts the existing roadway naming and building numbering schemes, as well as the roadway naming system and building numbering plan created by this ordinance, any proposed roadway naming and building numbering schemes within the unincorporated area of Polk County, and the layout of internal access roadways and lots or units in mobile home parks and apartment complexes.
- (c) Building: Any structure, including a mobile home, which is designed, built or used for the support, enclosure, shelter, or protection of people for any

residential, commercial, or industrial purpose.

- (d) **Building Front:** That area or portion of a building or its facade which faces the roadway and determines which roadway would be named in the building's address unless another designation is deemed necessary by the 9-1-1 Addressing Office.
- (e) **Building Numbering Plan:** A system by which existing buildings and projected lots and other sites for future buildings are assigned a building number to be combined with the roadway name for address in a uniform and coordinated manner as developed by the Enhanced 9-1-1 Addressing Office and depicted on the Address Numbering Maps.
- (f) **City-Style Addressing:** Assignment of house numbers in sequential order using the grid of the existing community and the roadway name from which the building is accessed.
- (g) **County Manager:** The County Manager appointed by the Polk County Board of County Commissioners.
- (h) **Enhanced 9-1-1 Emergency Telephone System:** The system maintained and operated by the Enhanced 9-1-1 Office whereby the Uniform Roadway Address System created by this Ordinance, the Address Numbering Maps, the telephone numbers associated with given addresses, and the Enhanced 9-1-1 Office's communications equipment and facilities are used in conjunction with each other to provide an efficient and reliable response to emergencies reported via 9-1-1 emergency telephone calls.
- (i) **Enhanced 9-1-1 Addressing Office:** The office and staff organized and operating within the Emergency Management Division of Polk County Department of Public Safety which is authorized and directed by this Ordinance to administer, the Uniform Roadway Address System.
- (j) **Master Street Address Guide:** A listing of all streets and house number ranges within a 9-1-1 service area.
- (k) **Mobile Home Park:** A single parcel of land under a single ownership where 5 or more lots are offered for lease or rent for placement of mobile homes or where mobile homes are offered for lease or rent, and which is developed with all necessary facilities and services for park residents in accordance with an approved site development plan.
- (l) **Multiple Building Complex:** 5 or more detached principal buildings situated on a single lot to which access is gained by a common driveway or internal access roadway.
- (m) **Occupant:** Any person, firm, partnership, corporation, trust, association, or

other entity or organization which is occupying or leasing a building or other real property for a period exceeding 30 days.

- (n) Owner: Any person, firm, partnership, corporation, trust, association, or other entity or organization which owns the fee title to, or has an undivided interest in, a building or other real property.
- (o) Principal Building or Structure: The building or structure having the primary use of the lot.
- (p) Private Roadway: Those roadways which are not maintained by any public entity; but rather are maintained by those property owners who own the property underlying or abutting the road. Those roads, excluding a parking lot, providing access to five or more principal buildings and subject to the roadway naming requirements of this Ordinance
- (q) Private Driveway: A privately owned driveway which is not maintained by a public entity in the area of the County right-a-way and is subject to County driveway standards, excluding a parking lot, which provides access to more than 5 principal buildings and is not subject to the roadway naming requirements of this Ordinance, and is exempt from County road construction standards.
- (r) Recreational Vehicle: A temporary living quarters for recreational, camping, or travel use which either has its own motive power or is mounted on or drawn by another vehicle.
- (s) Recreational Vehicle Park (R. V. Park): A single parcel of land under a single ownership where 5 or more lots are offered for lease or rent for the non-permanent placement of recreational vehicles or tents, and which is developed with all necessary facilities and services for park residents in accordance with an approved site development plan.
- (t) Roadway: All thoroughfares, ways, or routes of travel located in the unincorporated areas of Polk County, including but not limited to roads, highways, and all open right-of-ways, when any part thereof is designed for or open to the use of the public for purposes of vehicular transportation or traffic. This does not include parking lots, bicycle paths, alleys, sidewalks, service entrances, driveways, and privately-owned roadways which do not meet the definition of a private roadway as set forth in Subsection (p).
- (u) Roadway Naming System: A system by which the names of all projected and existing roadways may be included on the Address Numbering Maps subject to review for compliance with the Polk County Subdivision Regulations and this Ordinance.
- (v) Uniform Roadway Address System: The system created by this Ordinance

which incorporates the Roadway Naming System, the Building Numbering Plan, and the Address Numbering Maps.

SECTION 4: ENHANCED 9-1-1 ADDRESSING OFFICE AND ITS DUTIES.

- (a) Designation: The Enhanced 9-1-1 Addressing Office of the Polk County Department of Public Safety's Emergency Management Division shall design, implement, administer, operate and maintain the Uniform Roadway Address System.
- (b) Duties: The Enhanced 9-1-1 Addressing Office shall:
 - (i) Gather information concerning all roadway names and other information to determine whether such roadway names comply with the Polk County Subdivision Regulations, and this Ordinance;
 - (ii) Design and prepare a Roadway Naming System, Building Numbering Plan, Address Numbering Maps and the Uniform Roadway Address System established by this Ordinance, in accordance with requirements set forth in this Ordinance, with the assistance of other departments and divisions of Polk County as directed by the County Manager;
 - (iii) Review, in cooperation with any municipality, proposed roadway names and designations in proposed plats for subdivisions in the unincorporated areas of Polk County to determine whether such proposed roadway names and designations comply with the Polk County Subdivision Regulations and this Ordinance; and
 - (iv) Assign building numbers to each existing building and for each subsequently constructed building in accordance with the Building Numbering Plan described in Section 7 below, and subject to the approval of the Enhanced 9-1-1 Addressing Office.

SECTION 5: ROADWAY NAMING SYSTEM.

Polk County shall establish and govern a Roadway Naming System in accordance with the following procedures:

- (a) All roadways named by the recording of plats containing such names or by the assignment of such names by other authorized means prior to the effective date of this Ordinance, including roadways within mobile home and RV parks and multiple building complexes, may retain their names and shall be included on the Address Numbering Maps by the Enhanced 9-1-1 Addressing Office.
- (b) Roadway Naming Criteria: The following criteria shall be followed when naming a roadway:

- (i) Duplicate names shall not be allowed within an addressing district. Use of a different roadway type does not change the fact that the name is duplication. The exception to this policy will be using the same name but different roadway types within the boundaries of a platted subdivision.
 - (ii) Roadway names shall contain no more than twenty characters.
 - (iii) No punctuation or special characters shall be used in roadway names.
 - (iv) Roadway names shall not consist of more than three words, not to include roadway type.
 - (v) The roadway name shall not contain any word that is a type of direction.
 - (vi) Sound alike names shall not be used.
 - (vii) Directional indicators shall not be used on circle roadways.
 - (viii) Roadway abbreviations and designation definitions shall meet the criteria outlined in this Ordinance. (Appendix A)
 - (ix) Names that are deemed offensive by the Addressing Office shall not be used.
 - (x) Roads may be named or renamed by the Enhanced 9-1-1 Addressing Office, property owners on the roadway to be named, or by the Board of County Commissioners.
- (c) As names are assigned to existing unnamed roadways and assigned to new roadways through the platting of subdivisions or other authorized means, such roadway names and new roadways shall be reviewed by the Enhanced 9-1-1 Office for conflict with the naming criteria in this Ordinance and included on the Address Numbering Maps.
- (d) The Enhanced 9-1-1 Addressing Office may rename any roadway in unincorporated Polk County, in accordance with the Polk County Subdivision Regulations and this Ordinance, if it determines that such renaming is necessary to avoid confusion, or to facilitate a timely response by emergency services. The changing of a directional or roadway type is not considered a renaming.
- (e) If the Enhanced 9-1-1 Addressing Office initiates the naming or renaming process, all property owners who access their property by way of the roadway will be polled to determine a pool of possible roadway names.
- (f) If a private roadway or private driveway naming or renaming is initiated by a property owner, the property owner shall be responsible for all costs associated with adding or changing the roadway markers.
- (g) The Enhanced 9-1-1 Addressing Office will petition all property owners who access their property by way of the roadway regarding the naming or renaming of the roadway, regardless of who initiates the naming or renaming process.
- (i) A roadway naming or renaming initiated by the Enhanced 9-1-1

Addressing Office will require 50% plus one acceptance by the responding property owners who access their property by way of the roadway.

- (ii) A roadway naming or renaming initiated by a property owner will require 75% acceptance by the responding property owners who access their property by way of the roadway before the Enhanced 9-1-1 Addressing Office will proceed with the naming process.
- (iii) If none of the property owners respond to the petition, the Enhanced 9-1-1 Addressing Office may re-petition the owners, terminate the naming process, or set a public hearing to name or rename the roadway.

(h) Consent Agenda

- (i) If 75% of the responding property owners who access their property by way of the roadway vote to accept the new name initiated by a property owner, a resolution naming or renaming the roadway will be presented to the Board of County Commissioners for adoption by the Board.
- (ii) If 50% plus one of the responding property owners vote to accept the new name during an E9-1-1 Addressing Office initiated naming or renaming, a resolution naming the roadway will be presented to the Board of County Commissioners for adoption by the Board.

(i) Public Hearings

When a roadway naming or renaming is initiated by the E9-1-1 Addressing Office, a Public Hearing will be scheduled if less than 50% plus one of the responding property owners who access their property by way of the roadway vote to accept the new name. The most popular of two petitioned road names will be the name brought before the Board in the Public Hearing.

SECTION 6: POSTING OF ROADWAY NAMES.

- (a) The posting of names of public roadways in the unincorporated areas of Polk County shall be done in accordance with general law and shall remain the responsibility of the governing authority having jurisdiction over such public roadways.
- (b) The posting of the names of private roadways which are connected to a public roadway or right-of-way in the unincorporated areas of Polk County shall be the responsibility of the governing authority having jurisdiction over such public roadway or right-of-way.

- (c) The posting of the names of private roadways which are not connected to a public roadway or right-of-way shall be the responsibility of the owners of the private roadway or land abutting such private roadway. It shall be the joint duty and responsibility of the owners of a private roadway which is not connected to a public roadway or right-of-way, or the owners of the abutting land, to post or display the name of such private roadway at or near each point where it connects or intersects with another private roadway in such a manner that the roadway name is legible and visible to motorists traveling along the connecting or intersecting private roadway. No one posting the name of a private roadway under this subsection shall use a sign having white letters on a green background.

SECTION 7: BUILDING NUMBERING PLAN.

- (a) All buildings to which building numbers were previously assigned and are in compliance or conformity with the grid numbering system described in Section 9 of this Ordinance and other requirements of this Ordinance, shall retain such numbers.
- (b) Address numbering criteria - Addresses must meet the following criteria to be considered acceptable:
 - (i) Odd and even addresses shall not change sides of roadway within an addressing district.
 - (ii) Addresses shall not be out of sequence.
 - (iii) Addresses shall be verified to ensure they are not out of the numbering range of the Master Street Address Guide file.
- (c) All buildings for which building permits or mobile home set-up permits are issued on or after the effective date of this Ordinance shall be numbered in compliance with the requirements of this Ordinance.
- (d) Mobile homes and mobile home lots located within a mobile home park and units located within a multiple building complex shall be numbered in a logical sequence while sharing a common address provided such numbering scheme is included in the Building Numbering Plan and depicted on the Address Numbering Maps.
- (e) Property owners are responsible for notifying tenants/renters/leasers and mobile home park residents of address/roadway name changes.

SECTION 8: POSTING OF BUILDING NUMBER.

It shall be the joint duty and responsibility of the owners and occupants of each building located in the unincorporated areas of Polk County to post or display the assigned building number on or near such building in accordance with the following requirements:

- (a) The building number shall be displayed by permanently attaching the building number to the building front. In situations where the structure is not visible from the roadway, the building number shall also be permanently attached to a separate permanent structure such as a mailbox, post, wall or fence; provided that such separate structure is clearly visible and legible from the roadway which the building is addressed. The cost of the individual address numbers shall be the responsibility of the property owner and occupant.
- (b) The building number shall be clearly visible and legible from the roadway by which the building is addressed and shall clearly identify the building to which it is assigned.
- (c) The building number shall be displayed by the use of Arabic numerals of a height of not less than three (3) inches and the numerals shall be of a color which contrasts with the color of the immediate background.
- (d) The numerals used for the display of a building number shall be made of a durable weather-resistant material and shall be permanently affixed to their supporting structure
- (f) The owners and occupants of each building erected shall comply with this Section as a prerequisite to obtaining a certificate of occupancy.

SECTION 9: UNIFORM ROADWAY ADDRESS SYSTEM.

A Uniform Roadway Address System devised by the Enhanced 9-1-1 Addressing Office shall be based on a grid system which is a system of vertical and horizontal axes and which shall incorporate the Roadway Naming System and the Building Numbering Plan in compliance with the Polk County Subdivision Regulations and this Ordinance. The Uniform Roadway Address System shall be implemented in accordance with the following procedures:

- (a) If a building is located on a lot which is adjacent to two or more roadways, the roadway name to be used in that building's address shall be the name of the roadway by which the building is accessed from the roadway by a driveway unless another designation is deemed necessary by the 9-1-1 Addressing Office. The number assigned to such building shall then be determined in accordance with Section 8 of this Ordinance.
- (b) If a roadway runs in both north-to-south and east-to-west directions, the direction of such roadway, for the purpose of assigning even or odd numbers to buildings on a given side of the roadway, shall be determined by the direction in which the greater proportion of the roadway runs or by such other logical means as would minimize confusion where a predominant direction cannot be reasonably determined.
- (c) The Enhanced 9-1-1 Addressing Office may retain the address numbering schemes used for mobile homes, lots within mobile home parks, or units

within multiple building complexes as authorized or assigned prior to the effective date of this Ordinance by the United States Postal Service, the government of Polk County, or the government of a municipality, if retention of such address number schemes is the most reasonable option.

- (d) In situations where it would be more reasonable or practical for the Enhanced 9-1-1 Addressing Office to assign an address to a building located in close proximity to a municipality based on a separate grid numbering system used by said municipality, it shall be within the discretion of the Enhanced 9-1-1 Addressing Office to assign a number to such building which is in conformity with the municipality's separate grid numbering system.
- (e) Within 30 days after a parcel of land, a subdivision, or any part thereof, becomes part of the unincorporated area of Polk County by municipal contraction or otherwise, the Enhanced 9-1-1 Addressing Office shall review the address numbers of such property and determine whether such numbers, their posting, and the method of numbering for such contracted portion conform to the designated system and the Building Numbering Plan established by this Ordinance.
- (f) Newly platted subdivisions will be addressed by the Enhanced 9-1-1 Addressing Office or a designated addressing authority after the subdivision has been finalized.

SECTION 10: LOT NUMBERING AND POSTING FOR MOBILE HOME PARKS.

Notwithstanding any other provision of this ordinance to the contrary, all new Mobile Home/RV Parks shall be addressed according to established city-style addressing schemes, to include the following:

- (a) Roadway name signs shall be erected internally within Mobile Home/RV Parks and the cost of such roadway markers shall be the responsibility of the Mobile Home/RV Park Owner.
- (b) Address numbers shall be posted on mobile homes and RVs and placed where they can be easily seen from the roadway which they front. The cost of the individual address numbers shall be the responsibility of the specific mobile home owner and RV owner.
- (c) City-style addresses shall be assigned to lots within Mobile Home/RV Parks in accordance with the provisions of this Ordinance.
- (d) Lots within existing Mobile Home/RV Parks may be re-addressed, on a case by case basis, in compliance with the requirements of this Ordinance.

SECTION 11: VIOLATIONS AND PENALTIES.

- (a) The Codes Enforcement Division shall have the authority and duty to

investigate reported violations of this Ordinance and to proceed against violators of this Ordinance as specified in Polk County Ordinance 85-6, as amended.

- (b) The owner and occupant of any building in the unincorporated areas of Polk County which is not in compliance with the provisions of this Ordinance shall be subject to prosecution before the Polk County Code Enforcement Board and shall be subject to administrative fines and liens as set forth in Polk County Ordinance No. 85-6, as amended.

SECTION 12: ADOPTION OF A PROCEDURES MANUAL.

The Enhanced 9-1-1 Addressing Office shall prepare a procedures manual to be used for establishing addressing guidelines. The procedures manual shall be construed in compliance with this Ordinance. The procedures manual shall be detailed, explaining procedures for public notification of address changes, the procedures for County staff and County citizens to follow for roadway name designations and changes, and the specific criteria utilized when naming a roadway.

SECTION 13: BOARD OF COUNTY COMMISSIONERS' AUTHORITY UNDER F.S. SECTION 336.05.

Nothing in this ordinance shall be construed to limit the Board's authority to name county roads pursuant to section 336.05, Florida Statutes.

SECTION 14: CODIFICATION.

It is the intention of the Board of County Commissioners that the provisions of this Ordinance shall become and be made a part of the Polk County Code and the word ordinance may be changed to section, article, or other appropriate word or phrase and the sections of this Ordinance may be renumbered or relettered to accomplish such intention; provided, however, that Section 12 and 16 shall not be codified.

SECTION 15: SEVERABILITY.

If any portion of this Ordinance is for any reason held to be invalid or unconstitutional by a court of competent jurisdiction, such portion shall be deemed a separate, distinct and independent provision and such holding shall not affect the validity of the remaining portions of this Ordinance.

SECTION 16: CONFLICTS WITH OTHER ORDINANCES.

The provisions of this Ordinance shall supersede and control when the provisions of this Ordinance are deemed to be inconsistent with the provisions of any previously adopted Ordinance of Polk County.

SECTION 17: POLK COUNTY ORDINANCES 90-38 AND 00-27 ARE HEREBY REPEALED.

SECTION 18: EFFECTIVE DATE.

This ordinance shall become effective upon receipt of acknowledgment, from the Florida Department of State, that a certified copy of the ordinance has been filed with that office.

Appendix A

ROADWAY ABBREVIATIONS & DESIGNATION DEFINITIONS:

ALY.....ALLEY

Short dead end roadway.

ANX.....ANNEX

A division of buildings.

APT.....APARTMENT

Unit of a multi-residential building.

APTS.....APARTMENTS

Multi-residential units.

AVE.....AVENUE

Run in same direction of the existing avenues in the community. Normally terminate at a street.

BLVD.....BOULEVARD

Major thoroughfare of a subdivision. Connects at least two sections and acts as collector roadway. Unusually wide thoroughfares, sometimes divided by a center island.

BND.....BEND

Roadway which makes sharp curve at end.

BR.....BRANCH

An extension of an existing building.

CIR.....CIRCLE

Circular streets that begin and end at the same point.

CROSSING.....CROSSING

An intersection of roadways; a place where a roadway may be crossed/accessed.

Appendix A continued

CT.....COURT

Permanent dead-end roadways or ending in a cul-de-sac. Less than 1000 feet.

CV.....COVE

Entrance roadway to small secluded area.

DR.....DRIVE

Short or long roadways with potential for continuation. Used for naming private drives.

DRWY.....DRIVEWAY

Privately owned roadway that is used as an entrance to a parcel of land that cannot be seen from the main roadway.

FORK.....FORK

A place where a roadway divides into branches

GATEWAY.....GATEWAY

An entrance or access.

HWY.....HIGHWAY

Major roadways. US or State Roadways.

LN.....LANE

Permanent dead-end roadway or ends in cul-de-sac. Less than 1000 feet in length.

LOOP.....LOOP

Short roadways that begin and end on the same street, but not at the same point.

PASS.....PASS

Intersects two different roadways, not at major intersections.

PATH.....PATH

Dirt roadway in rural areas.

Appendix A continued

PL.....PLACE

Permanent dead-end roadway or end in a cul-de-sac. Less than 1000 feet in length.

PKY.....PARKWAY

A special scenic route or park drive.

RD.....ROAD

Long stretch of roadway over a 1000 feet in length.

ST.....STREET

Must run in direction of existing streets in the community. Normally terminate at an avenue.

TER.....TERRACE

Short dead-end roadways.

TRL.....TRAIL

Dirt roadway in rural areas.

WAY.....WAY

Permanent dead-end roadways or ends in a cul-de-sac. Less than 1000 feet in length.

APPENDIX I: EXAMPLE PERSONNEL OFFICER POSITION DESCRIPTION

HILLSBOROUGH COUNTY JOB DESCRIPTION

Position Title: Resource Management Chief

Job Code: U8038

Grade: E XE

March 2010

POSITION SUMMARY

Administer a \$80M payroll for 800+ employees. Direct all hiring, internal affairs, disciplinary, evaluation, and worker compensation issues. Negotiate, implement and ensure compliance with collective bargaining agreements. Direct light duty (part time) assignments. Develop department policies and procedures and ensure compliance. Research, procure and implement administrative technology and grant awards.

KEY RESPONSIBILITIES	% OF TIME
Plans, organizes, and directs the department's personnel and projects.*	20
Determine progressive discipline, grievances, and work compensation issues.*	10
Directs Light Duty Employee Program.	5
Administer payroll program for 850+ Fire Rescue employees.*	10
Direct hiring, promotion, evaluation, termination and due process issues with Civil Service. Ensure compliance with federal, state and local laws, ordinances (ADA, FLSA, etc.).	10
Negotiate, implement, and ensure compliance with collective bargaining contracts.*	10
Manage department-wide Health and Safety program for liability and cost reduction including infectious disease control issues, accident review, equipment procurement.	10
Research, procures, and implements administrative technology enhancements (payroll/safety) and research, apply for and administer grant awards.	10
Direct battalion chiefs, firefighters and paramedics at major fires and rescue emergencies.*	5
Attend executive staff meetings and function as member of this group.	5
Conduct meetings for problem-solving; employee counseling; subordinate supervision.	5
* Indicates an "essential" job function.	

Position Title: Resource Management Chief

WORKING CONDITIONS

<p>Frequently in normal office situation Occasionally in a high noise environment. Occasionally requires extensive safety training and/or protective devices Occasionally has exposure to moving machinery and/or vehicles Occasionally requires travel, excluding overnight stays Occasionally works on slippery or uneven surfaces Occasionally has exposure to infectious material/disease. Occasionally has exposure to weather including heat, cold, dampness and/or humidity Occasionally works in water.</p>	<p>Occasionally in a high dust, dirt, grease environment Occasionally works with poor ventilation or with exposure to odors Occasionally works above or below ground level. Occasionally has exposure to chemicals, solvents Occasionally works in darkness or with poor lighting Occasionally requires travel, including overnight stays</p>
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PHYSICAL EFFORT

<p>Frequently sitting at a desk or table. Occasionally standing and/or walking Occasionally requires repeated reaching by extending hand(s) and/or arm(s) in any direction Occasionally requires balancing to prevent falling or erratic movement. Occasionally requires moderate lifting or carrying 26-50 lbs Occasionally requires climbing ladders or scaffolds Occasionally drives and/or operates heavy equipment. Occasionally requires good near or distant vision Occasionally requires feeling to perceive an object(s) size, shape, temperature or texture by means of senses in your skin.</p>	<p>Occasionally intermittently sitting, standing, or stooping. Occasionally crawling and/or kneeling Occasionally pushing and/or pulling Occasionally requires handling by seizing, holding, grasping, or turning hands, but without finger dexterity Occasionally requires light lifting or carrying 25 lbs or less Occasionally requires heavy lifting or carrying 51 lbs or more Occasionally uses equipment requiring high dexterity Occasionally requires good hearing Occasionally requires distinguishing colors and/or depth perception to judge distances</p>
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KEY JOB REQUIREMENTS

Formal Education:	Bachelor's Degree required FL State Firefighter Certification required FL State Certification as paramedic preferred. Master's Degree preferred.
Work Experience:	5 years to < 7 years
Impact of Actions:	Makes decisions and final recommendations which routinely affect the activities of others. Position duties may include responsibility for developing strategic plans.
Complexity:	Analytic: Work is non-standardized and widely varied requiring the interpretation and application of a substantial variety of procedures, policies, and/or precedents used in combination. Frequently, the application of multiple, technical activities is employed; therefore, analytical ability and inductive thinking are required. Problem-solving involves identification and analysis of diverse issues.
Decision Making:	Analytic: Supervisor is available to establish broad objectives relative to basic position duties or departmental responsibilities. Independent judgment is required to study previously established, often partially relevant guidelines; plan for various interrelated activities; and coordinate such activities within a work unit or while completing a project.
Internal Communication:	Requires regular contacts with internal persons of importance and influence Involving considerable tact, discretion and persuasion in obtaining the cooperation of others. Requires the handling of delicate relationships and complex situations.
External Communication:	Requires regular external contacts to discuss issues of moderate importance and to respond to inquiries Also requires continuing contacts with the public involving the enforcement of regulations, policies and procedures.

<i>Managerial Skills:</i>	Responsible for making recommendations within a department in the areas of compensation, staff selection, disciplinary action, complaint, staff performance appraisal, and similar supervisory duties. Plan, assign, and evaluate the work of subordinates for effective operation and results.
<i>Problem Solving:</i>	Problem solving involves identification and analysis of diverse problems; answers are usually found by reviewing standard technical manuals and administrative procedures and modifying them for unusual situations. Guidance is usually provided on what sources to review and solutions are reviewed before acceptance.
<i>Planning:</i>	Four to twelve months: Plan events that will occur during the year, and have some effect on the department's annual expenditures, and or revenues.
<i>Planning Scope:</i>	Team

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